

PLAT BOOK

and COMPLETE SURVEY

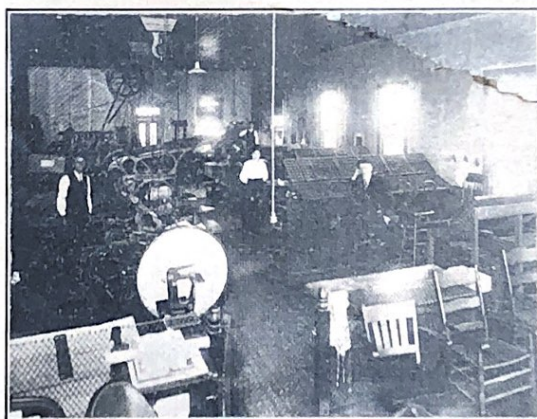
— of —

PERRY COUNTY

ILLINOIS

Containing Plats of all Townships with Owners Names; also Outline Map of the County showing location of Townships, Villages, Roads, Schools, Churches, Railroads, Streams, Etc.

Also Map of Illinois and the United States, Farm Animal Chart with Remedies for Diseases, Etc.



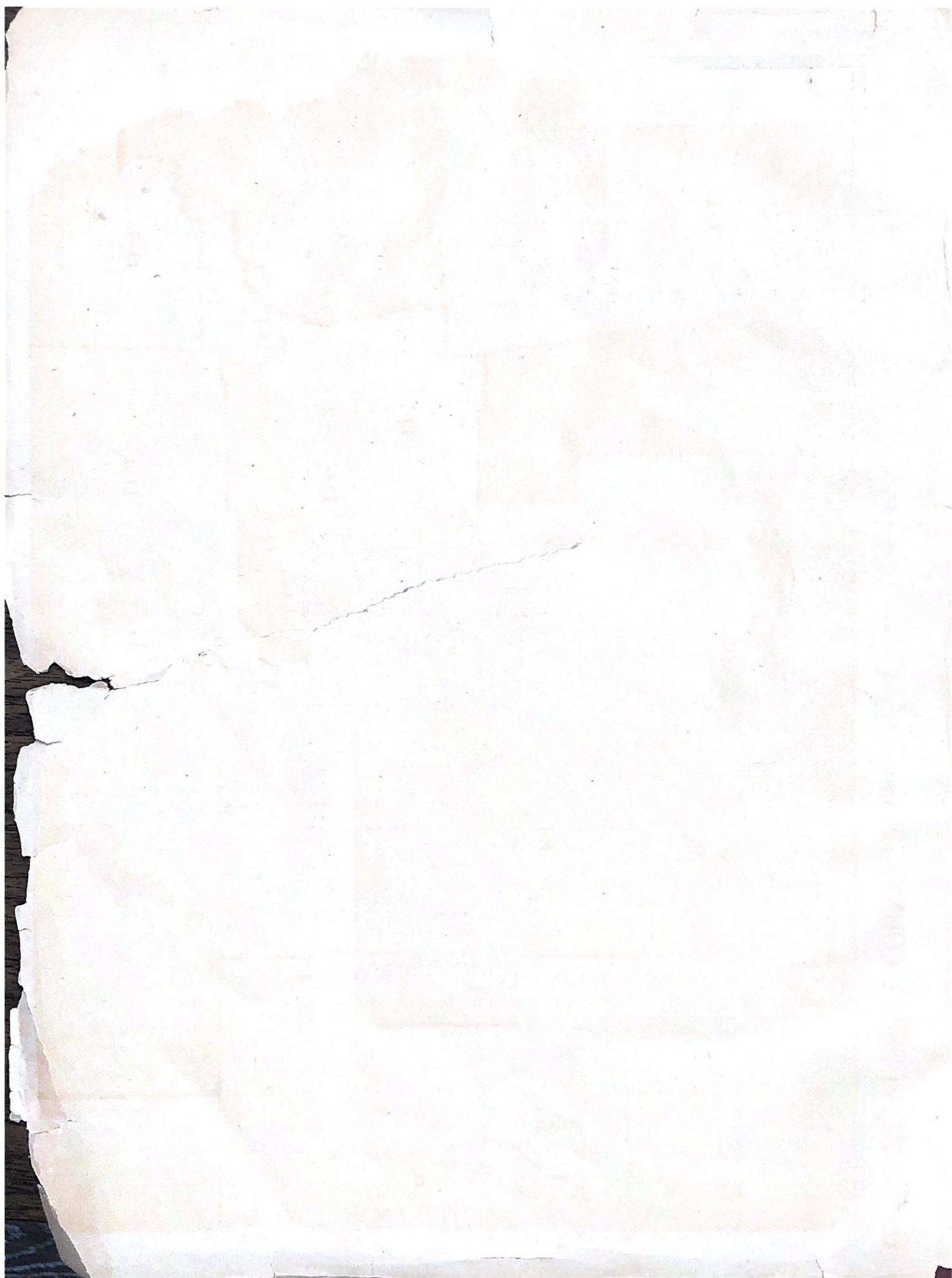
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"All Home Print"
 Pinckneyville, Illinois

Compiled From Latest Data on Record January 1st, 1920

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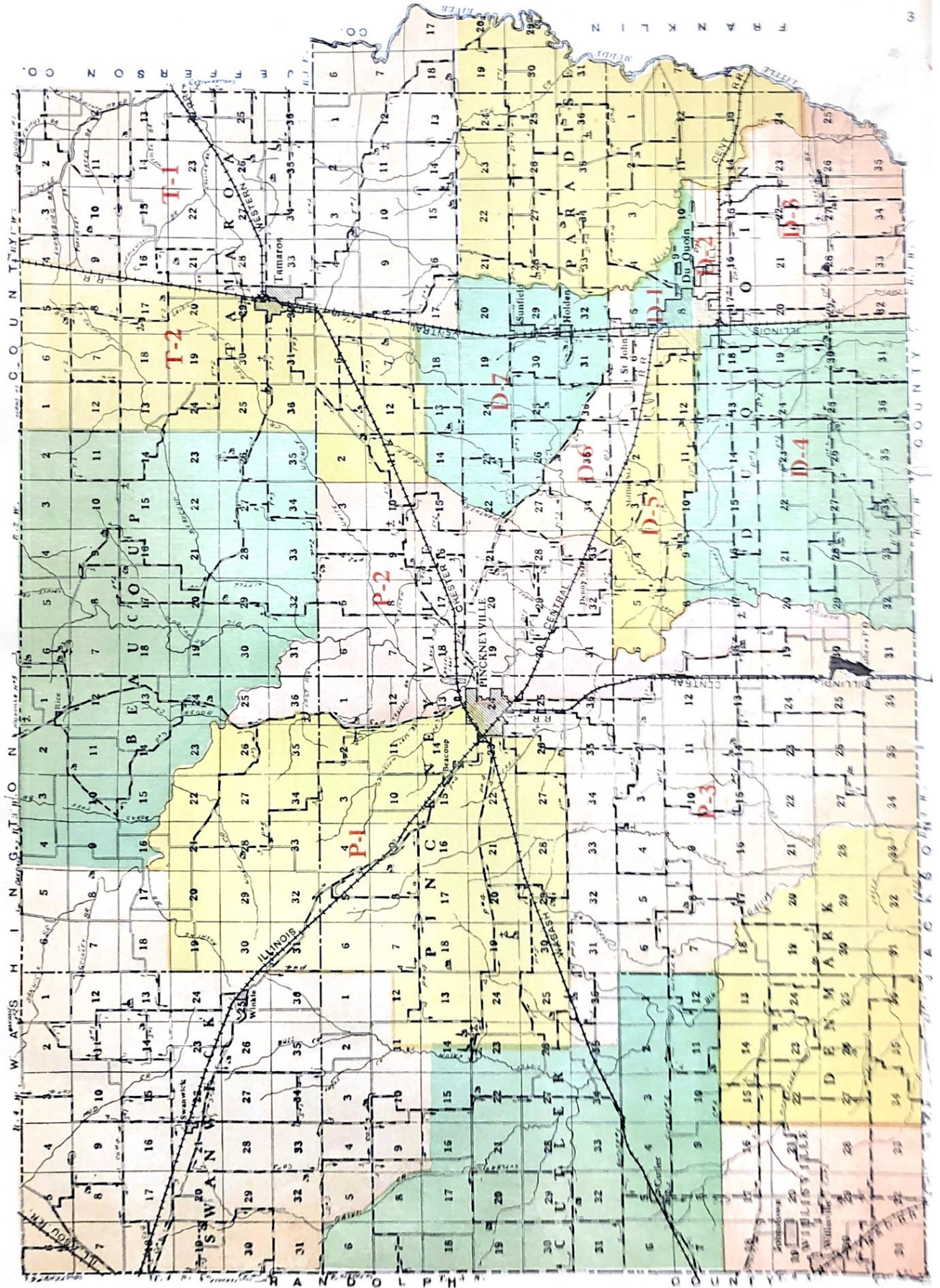


Outline Map of PERRY COUNTY, Illinois

Scale: 9-16 Inch to 1 Mile

The Voting Districts are shown in Colors

Rural Routes Shown thus: ---
Churches Shown thus:
Schools Shown thus:
Cemeteries Shown thus:



**You Get the Best Service, Coupled With
"National Safety" at this Bank**

**4%
ON DEPOSITS**



**4%
ON DEPOSITS**

FIRST NATIONAL AT TAMAROA
Ask Your Neighbor

EVERY DOLLAR MADE SAFE

Every dollar deposited in THE FARMERS STATE BANK of TAMAROA, ILLINOIS, is guaranteed by THE AMERICAN GUARANTY CO. of COLUMBUS, OHIO, thus giving to each individual depositor the same protection that is demanded by the U. S. Government, State, County, City, Township or School District of every bank in which Public Funds are placed.

**"SAFETY FIRST TO OUR DEPOSITORS"
IS THE SLOGAN.**

FARMERS STATE BANK

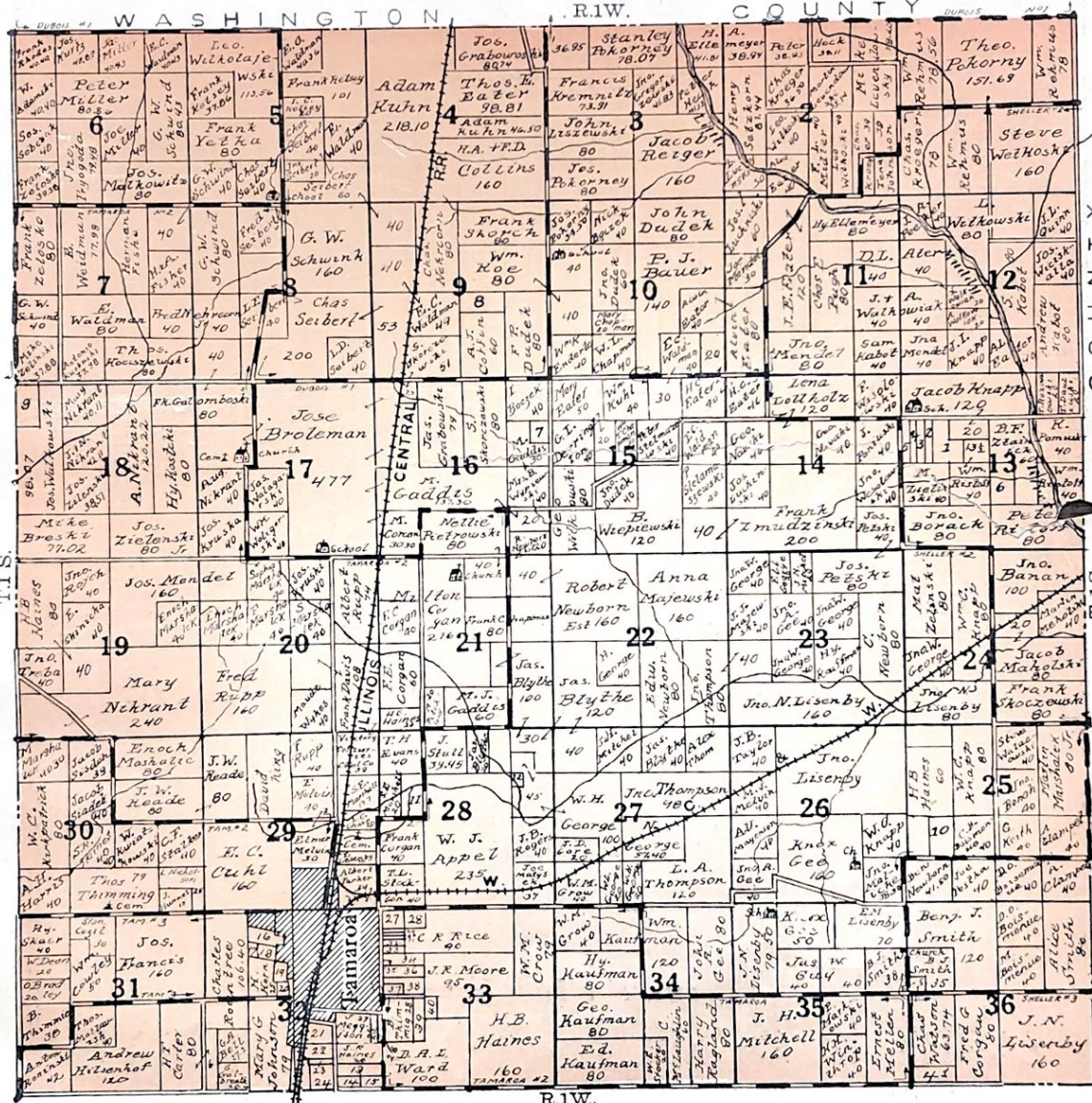
TAMAROA, ILL.

MAP OF Township 4, S. Range 1

West of the 3rd P. M.
PERRY COUNTY, ILLINOIS

Scale: 1½ inches to 1 mile

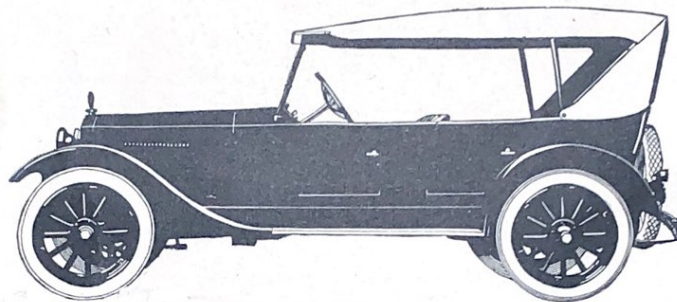
Improved Roads Shown thus: ——— Schools Shown thus: ——— Churches Shown thus: —
 Rural Routes Shown thus: ——— Cemeteries Shown thus: —
 Where Rural Routes run over Improved Roads, they are denoted by arrows thus: —→—



List of Small Property Owners in this Township Shown on Map by Numbers.

No.	Name	Acres.	Sec.	No.	Name	Acres.	Sec.	No.	Name	Acres.	Sec.
1.	Jos. Zialnick	20.31	13	11.	Tra. Moore	20	28	32.	C. C. Plubrick	3.25	33
2.	J. M. Taylor	6.66	13	12.	Wm. George	5	28	33.	W. H. Gerge	2.25	33
3.	F. J. Taylor	6.66	13	13.	Harry Morrow	10	28	34.	M. Shepman	9.25	33
4.	J. M. Taylor	6.66	13	14.	Thos. Thimling	5	32	35.	Geo. Leitch	75	33
5.	Frances Wasilowski	6.66	13	15.	W. D. Melvin	5	32	36.	A. H. Evans	10	33
6.	B. Zialnick	20	13	16.	T. L. Stockton	11.10	32	37.	E. N. Waller	7	33
7.	Joan Winn	10	13	17.	J. N. Lisenby	3	32	38.	Jno. R. Moore	12	33
8.	S. Skozewski	20	9	18.	Tamaron Colliery	5.6	32	39.	John Jaross	11	33
9.	Jos. Prucaski	20.05	18	19.	J. M. Miller	4.5	32	40.	F. A. Cox	5	33
10.	J. N. Lisenby	20	23	20.	C. Nalborski	7.6	32	41.	H. R. Wothrop	10.00	36

1920 GRANT SIX



This is an Entirely New Model Grant Six

Featuring Smartness With
Dependability



Represented in Perry County by

HARRY M. DUNN

PINCKNEYVILLE, ILL.

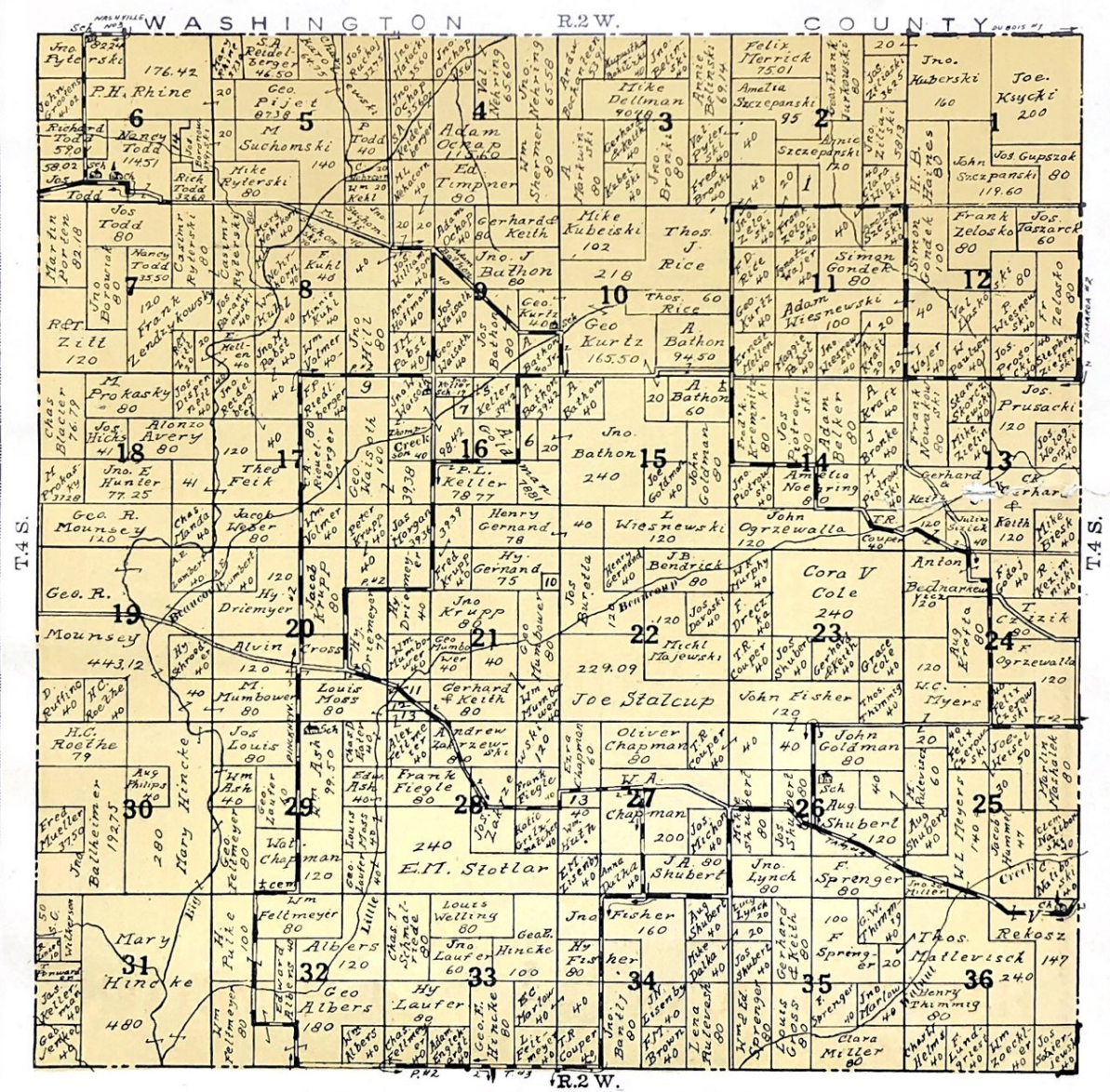
J. H. METTEN

DU QUOIN, ILL.

MAP OF Township 4 S. Range 2

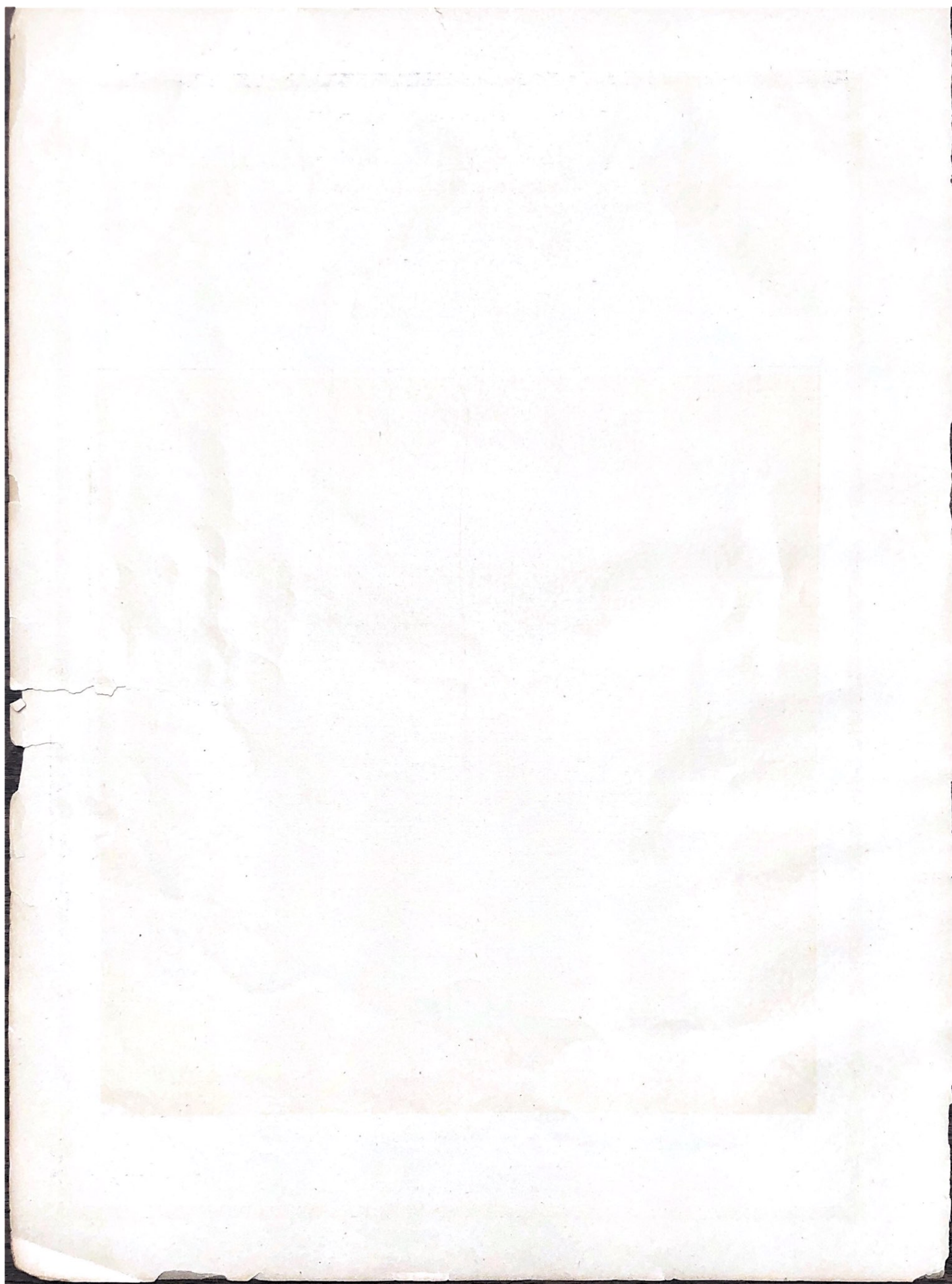
Scale: 1 1/2 inches to 1 mile
West of the 3rd P. M.
PERRY COUNTY, ILLINOIS

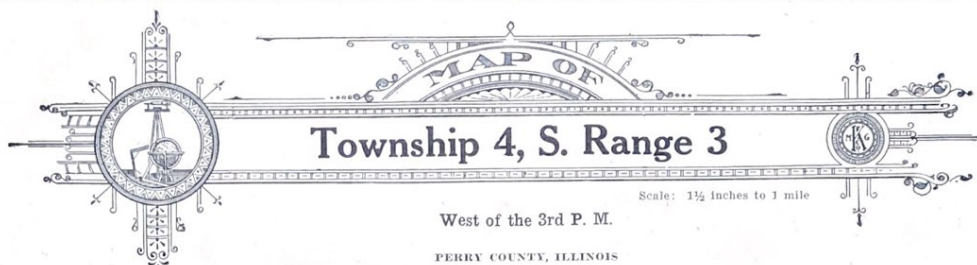
Improved Roads Shown thus: ——— Schools Shown thus: Churches Shown thus:
Rural Routes Shown thus: - - - Cemeteries Shown thus:
Where Rural Routes run over Improved Roads, they are denoted by arrows thus:



List of Small Property Owners in this Township Shown on Map by Numbers.

No.	Name.	Acres.	No.	Name.	Acres.	No.	Name.	Acres.	No.	Name.	Acres.
Twp. 4 South, Range 2 W.											
1.	Jos. Szczepanski	20	2.	Wm. Kuhl	23.24	8.	Geo. Vanderheld	20	17.	Geo. Mumbower	13
4.	Casimir Ryterski	20	5.	P. H. Keller	19.42	10.	Jos. Buretta	20	21.	Oliver Chapman	20
			7.	L. Thompson	10	11.	Chas. Later	20	24.	Thomas Todd	7.35
			8.	L. Thompson	29.42	16.			26.		6





Improved Roads Shown thus: ——— Schools Shown thus: Churches Shown thus:
 Rural Routes Shown thus: ——— Cemeteries Shown thus:
 Where Rural Routes run over Improved Roads, they are denoted by arrows thus:



List of Small Property Owners in this Township Shown on Map by Numbers.

No.	Name.	Acres.	Sec.	No.	Name.	Acres.	Sec.
Twp. 4 South, Range 3 W.							
1.	V. C. Deegenhardt	10	9	4.	Robert Milliken	20	14
2.	R. J. McKinstry	30	9	5.	J. H. Ward	2.50	19
3.	James Dempsey	20	10	6.	A. J. Arnett	10	22
				7.	Daniel Ruffino	20	24

R. M. CUPPLES

EVERETT LAMONT

CUPPLES & LAMONT

—DEALERS IN—

General Merchandise



COUNTRY PRODUCE, RAILROAD
AND MINING TIMBER



SWANWICK, ILL.

ROBB

GRAIN & IMPLEMENT CO.

—DEALERS IN—

GRAIN, FLOUR, FEED AND SEED

FARM IMPLEMENTS, TRACTORS
AND AUTOMOBILES

SWANWICK, ILLINOIS

CHESTER KNITTING MILLS

MANUFACTURERS OF

High Grade Seamless Hosiery

EMPLOY YOUNG LADIES

BRANCH MILL NO. 6, PINCKNEYVILLE, ILLINOIS

MAIN OFFICE
ST. LOUIS, MISSOURI

S. H. MORTON & CO.

GENERAL LAND DEALERS

Farming, Coal and Timber LANDS

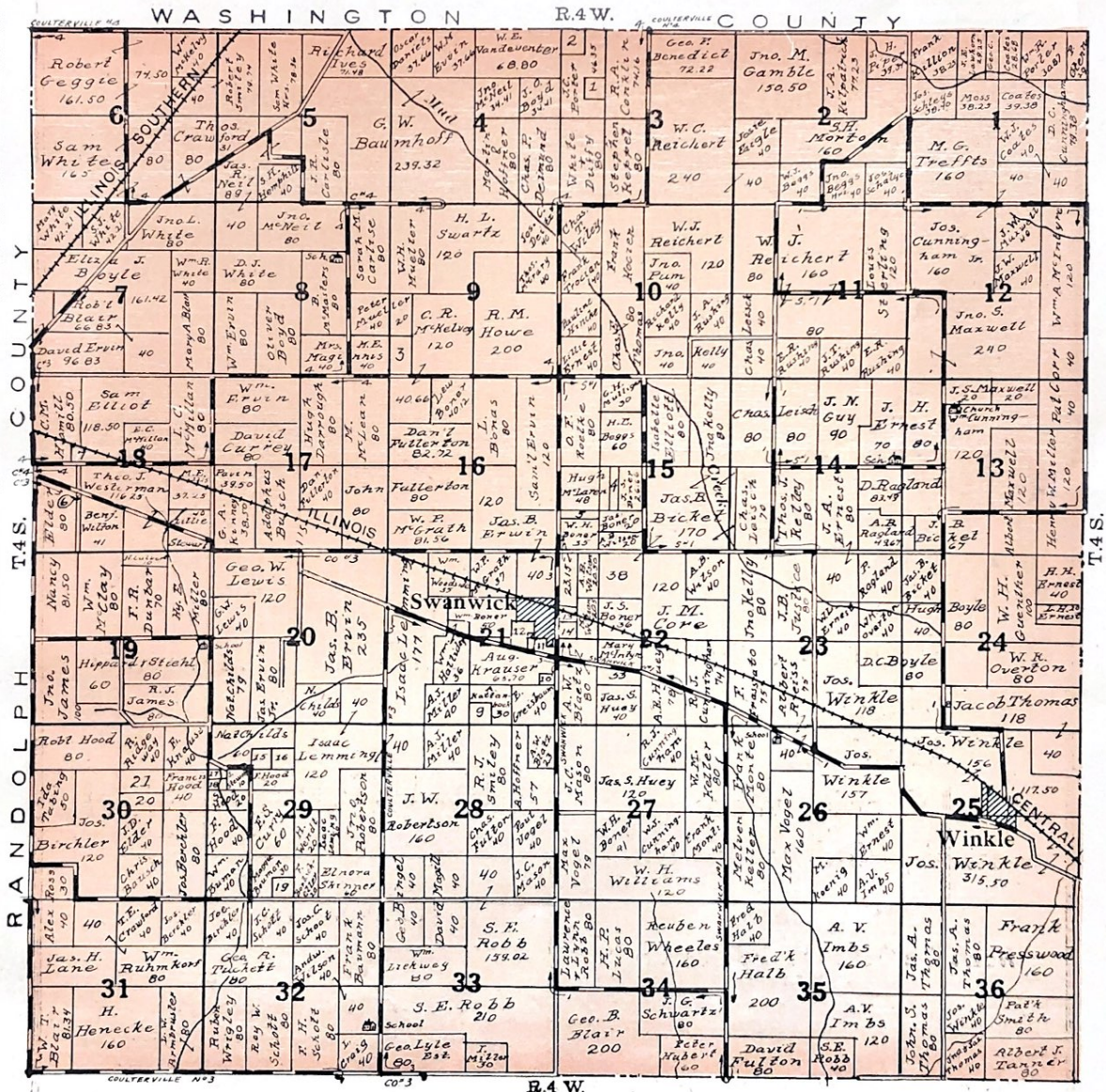
800 Title Guaranty Bldg., 706 Chestnut Street

WE CAN SELL YOUR LANDS

ST. LOUIS, MO.



Improved Roads Shown thus: ——— Schools Shown thus: Churches Shown thus:
Rural Routes Shown thus: - - - - - Cemeteries Shown thus:
Where Rural Routes run over Improved Roads, they are denoted by arrows thus:



List of Small Property Owners in this Township Shown on Map by Numbers.

No.	Name	Acres.	No.	Name	Acres.	No.	Name	Acres.	No.	Name	Acres.
1.	John Inghar	9.27	6.	Hippar & Stiel	2	11.	J. W. McMullan	12.55	21.	Dane Pullerton	5
2.	J. C. Edwards	9.24	7.	Chicago Coulterville Coal C.	18	12.	J. C. Mason	4.2	22.	Frank Gorman	10
3.	John Minton	20	8.	M. Klingenberg	2	13.	Matt. Robb	1.83	23.	Matt. Weidner	16
4.	M. H. K. Wilson	5.33	9.	G. F. Broadbent	10	14.	Theo. Westerman	10	24.	Mike Klaskin	30
5.	John Boner	5	10.	H. Merrill	3	15.	Frank Curry	10	25.	Lora M. Allen	17
			11.	J. C. Mason	4.95	16.	H. Jones	5			

WILDY & NEISING

CLOTHIERS

Hart Schaffner & Marx

Suits and Coats

Stetson Hats
Walk-Over Shoes

TRUNKS AND TRAVELING BAGS

PINCKNEYVILLE, ILLINOIS

Watches

Cut Glass

Clocks

Ivory Toilet Pieces

Silverware

Umbrellas

CHARLES GEUMALLEY

PINCKNEYVILLE, ILLINOIS

P. H. WALKER

Hardware, Stoves, Ranges

Washing Machines

Wringers, Lanterns

Aluminum Ware

Granite Ware

Mowers, Binders and Rakes

WHAT YOU BUY FROM US IS
GOOD

Phone 81 PINCKNEYVILLE, ILLINOIS

RITCHEY COAL COMPANY

MINERS AND SHIPPERS
OF

BEAUCOUP COAL

PINCKNEYVILLE, ILL.

W. S. WILSON, President

W. T. RITCHEY, Vice-President.

S. S. RITCHEY, Secretary-Treas.

H. R. SCHULZE

O. H. SCHULZE

H. R. SCHULZE & SON

DEALERS IN ALL KINDS OF BUILDING MATERIAL

Lumber, Common and Fire Brick, Drain Tile, Building Tile, Cement, Lime,
Chatt, Sand, Barb Wire, Nails, Roofing, Paints

ARE YOU RELATED TO THE MAN IN ARKANSAS?

You know, the Arkansas Traveller found a settler whose roof leaked a stream. He said he couldn't fix it while it rained, and when it didn't rain it didn't need fixing. If you have a roof that needs fixing, let's get at it before the winter storms. We have a complete line of **Good Roofing Materials**.

WE ARE BARN DOCTORS

A sick barn, like a sick horse, is a poor investment. Don't let your buildings run down—it doesn't pay. If you will tell us just what symptoms of decay your barn has, we can tell you mighty quick what should be done, and we can furnish you with the material for fixing it. WE have a plan book for you to mull over if you want to build a new barn.

ADD TEN ACRES TO YOUR FARM

Mr. Farmer how much corn did that wet field of yours produce this season? Supposing you could double that yield next year. Put in some drain tile, we have a nice line of them.

EVERY CUSTOMER OUR BEST CUSTOMER

We "play favorites" to all. Here the small and the large buyer are treated alike as princely patrons. Here, every order is handled as though our entire success depended on giving every customer 100 per cent satisfaction.

Pick up the receiver and call No. 52. We're at the other end—Listening—for your welcome tinging. We will be glad to furnish you anything from 3 brick to a car load of lumber.

Pinckneyville

TRY US

Illinois

PINCKNEYVILLE

CHICAGO

Illinois Sixth Vein Coal Co.

PINCKNEYVILLE, ILLINOIS

Operators and Shippers

Mines Bought Outright, Leased
or Handled on Contract Basis

"Servants to His Majesty, King Coal"

This is a historical map of the Denny Station area in Seattle, Washington. The map is a grid of property lots, each labeled with the owner's name and the acreage. The map is divided into numbered blocks (1-36) and street names. Key features include the Denny Station area, the Denny Branch of the Duwamish River, and the Denny Branch of the Duwamish River. The map is titled 'P.2 W.' and 'P.2 W.' at the top and bottom. The map is a historical document showing the layout of the city and the names of the owners of the land.

List of Small Property Owners in this Township Shown on Map by Numbers.

No.	Name.	Acres.	Sec.	No.	Name.	Acres.	Sec.	No.	Name.	Acres.	Sec.	No.	Name.	Acres.	Sec.
Twp. 5 South, Range 2 W.															
		5.	W. R. Martin	10	19	11.	G. W. Huggins	24	32	17.	G. W. Huggins	11	3		
		6.	Jacob Bartle	10	19	12.	O. F. McDonald	24	36	18.	Anton Hensler	20	2		
1.	Leo Holden	29	2	7.	Minerva Frizzell	2	33	13.	Iron Coal Co.	20	36	19.	Mary Hensler	20	2
2.	Cora A. Greer	1.75	3	8.	W. T. Ritcher	13	20	14.	Iron Coal Co.	22.5	25	20.	J. N. Whitaker	25.75	3
3.	Mary Held	20	19	9.	A. K. Leo	18	21	15.	Roxie Dry	5	31				
4.	Mary Henrichs	18.50	19	10.	Geo. Bird	3.5	32	16.	J. Morgenthauer	4	31				

MURPHY-WALL STATE BANK & TRUST COMPANY

PINCKNEYVILLE, ILLINOIS

Capital \$100,000.00

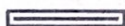
Surplus and Undivided Profits \$30,000.00

JOS. CRAWFORD,
President.

J. G. TAFFEE,
Vice President

CHAS. J. BISCHOF,
Cashier

C. H. DINTELMAN,
Asst. Cashier



Safe and Sane Methods have marked the business operations of this Bank since it opened for business in the year 1874.

Conservatism consistent with the rules of Sound Banking has ever been the Policy of our Bank.

The Welfare of Our Depositors is our first consideration in making investments for our Bank.

This Bank is under State Supervision, and must conduct its business along safe and sound lines in order to comply with the Banking Laws of the State of Illinois.

Our Bank is protected against loss through burglary by Insurance, Burglar Proof Safes kept in a Burglar Proof, Steel Lined Vault which is also Fire Proof. In addition, the Bank is equipped with an Electric Burglar Alarm Bank Protection System.

You are welcome at this Bank any time you may call. We want your business. All accounts will receive our careful attention regardless of size. Interest paid on time deposits and in our Savings Department.



The Bank With Many Years of Business Success

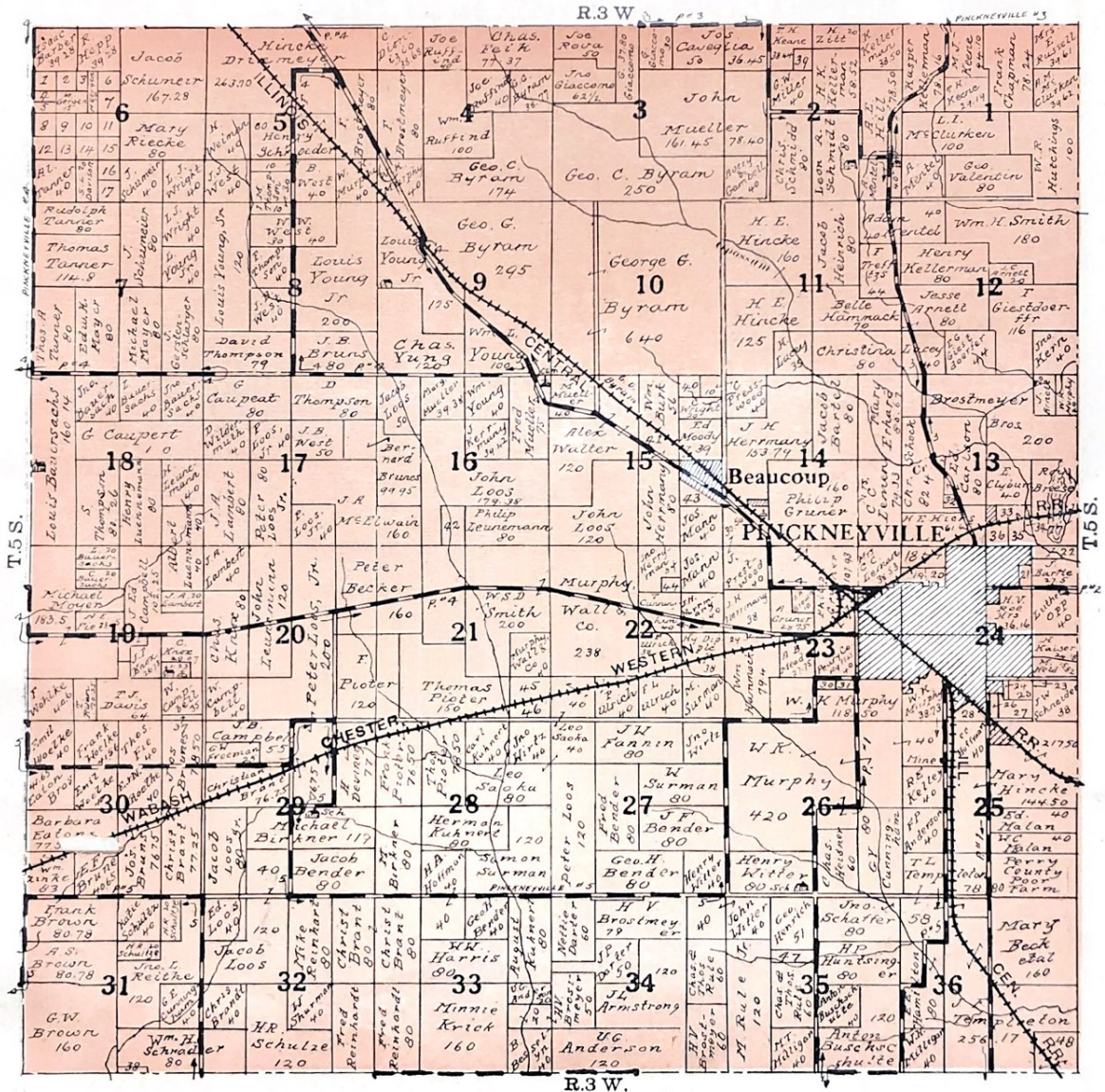
MAP OF Township 5, S. Range 3

Scale: 1½ inches to 1 mile.

West of the 3rd P. M.

PERRY COUNTY, ILLINOIS

Improved Roads Shown thus: ——— Schools Shown thus: Churches Shown thus:
Rural Routes Shown thus: - - - - - Cemeteries Shown thus:
Where Rural Routes run over Improved Roads, they are denoted by arrows thus:



List of Small Property Owners in this Township Shown on Map by Numbers.

No.	Name.	Acres.	No.	Name.	Acres.	No.	Name.	Acres.	No.	Name.	Acres.
Twp. 5 South, Range 3 West.											
1.	Rosa Gayle	10	12.	C. F. Quick	10	26.	Jas. Comoso	4.75	38.	Wm. Zinke	1.20
2.	N. F. Gruver	10	13.	H. Van Gordon	10	27.	S. H. Carson	11.25	39.	E. H. Kellerman	10
3.	J. O. Talnes	10	14.	F. L. Filder	10	28.	Mary Sullivan	14.75	40.	Narcissa Jones	10
4.	L. Wright	10	15.	E. & N. Thibault	10	29.	T. W. Dunn	2.65	41.	W. W. Burk	20
5.	S. H. Andrews	5	16.	T. & S. Thibault	10	30.	Wm. Quillman	23	42.	John Herrmann	20
6.	W. H. Stull	10	17.	M. Bruehl	10	31.	Thos. Turner	3	43.	Donk Bros. C. Co.	15
7.	O. Scott	10	18.	Hincke Bros.	18	32.	A. O. Bartley	2.65	44.	Thos. W. Dunn	6
8.	R. & B. Miller	10	19.	John Boyd	7.5	33.	Ed Carlson	11	45.	John Wirtz	20
9.	Joe Honock	10	20.	K. Lambert	7.74	34.	Pinckneyville Property	13	46.	Fred Strauch	8
10.	H. Van Gordon	10	21.	E. Bartie	4.4	35.	W. S. D. Smith	10	47.	F. B. Miller	6
11.	R. S. Miller	10	22.	Jacob Young	12.5	36.	Dewitt Hale	10	48.	Geo. Schorn	30.50
			23.	M. Gergens	10	37.	Jos. Bruns	5			36

H. C. COLE, President

C. B. COLE, Vice President

E. P. BRONSON, Treas. & Manager

H. C. COLE MILLING COMPANY

ESTABLISHED 1839

INCORPORATED 1888

Daily Capacity 1200 Barrels

Manufacturers of Flour from Soft Winter Wheat

Makers of the celebrated brands of Flour

OMEGA, DELTA, F. F. F. C. and in Self-rising Flour WHITE RING

Grain Elevators Located at CUTLER, ILL., and WELGA, ILL.

Where Highest Prices are Paid for Wheat and Stocks of Flour

Middlings and Bran are Carried at All Times

NELSON B. LAYMAN

Attorney at Law

DU QUOIN, ILLINOIS

General Practice of Law
in All State and Federal Courts

DU QUOIN EVENING CALL

DU QUOIN, ILLINOIS

The only daily newspaper in Perry, Franklin, Washington and Randolph Counties, should be read by all the leading citizens of these counties. Every Evening except Sunday.

\$4.50

IN PERRY COUNTY

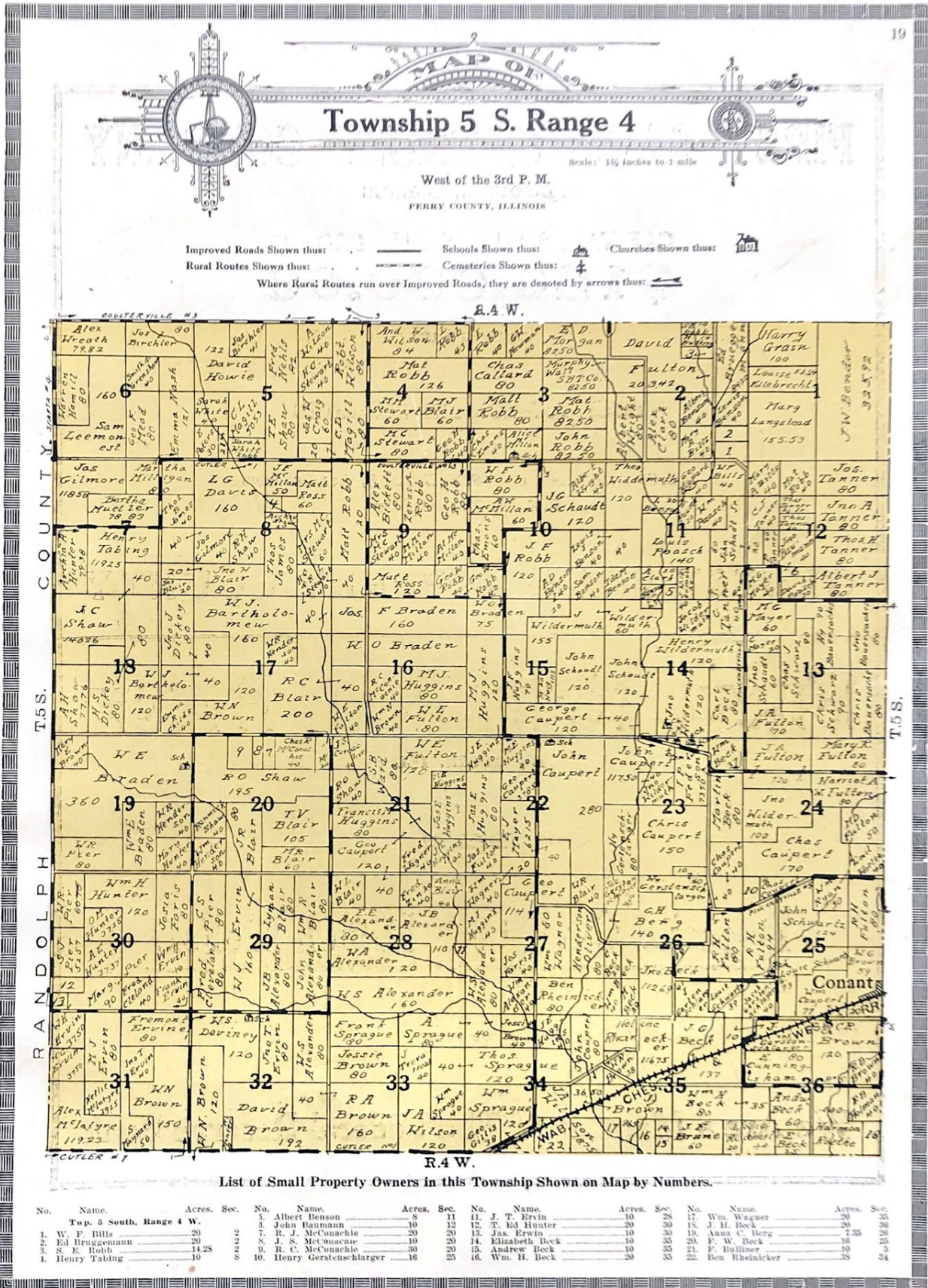
\$5.00

OUTSIDE PERRY COUNTY

And as to our Job Printing

We **P** REACH
THE
GOSPEL
of Good
PRINTING

It is the fad of our Job Department.



List of Small Property Owners in this Township Shown on Map by Numbers.

No.	Name	Acre.	Sec.	No.	Name	Acre.	Sec.	No.	Name	Acre.	Sec.	No.	Name	Acre.	Sec.
1.	W. F. Hills	20	20	3.	Albert Benson	8	11	11.	J. T. Ervin	20	10	17.	Wm. Wagner	20	30
2.	Ed Bruggemann	20	20	4.	John Baumann	10	12	12.	T. Ed Hunter	20	20	18.	J. H. Beck	20	20
3.	S. E. Robb	14.25	20	5.	R. J. McConachie	20	20	13.	Joe Ervin	10	30	19.	Anna C. Berg	10	20
4.	Henry Tabling	10	10	6.	J. S. McConachie	10	20	14.	Elizabeth Beck	10	30	20.	F. W. Beck	10	20
				7.	R. C. McConachie	20	20	15.	Andrew Beck	10	30	21.	F. Bullner	10	20
				8.	Henry Geratschlager	16	20	16.	Wm. H. Beck	20	30	22.	Ben Rheinecker	10	20

FIRST BANK & TRUST COMPANY

of DU QUOIN, ILLINOIS

CAPITAL, SURPLUS AND PROFITS

\$120,000.00

Established in 1860

YOUR PATRONAGE SOLICITED

L. S. SMITH, President F. N. LINZEE, Vice-President
R. S. LINZEE, Cashier

OLDEST BANK IN PERRY COUNTY

FIRST NATIONAL BANK

DU QUOIN, ILL.



Deposits Over One Million Dollars



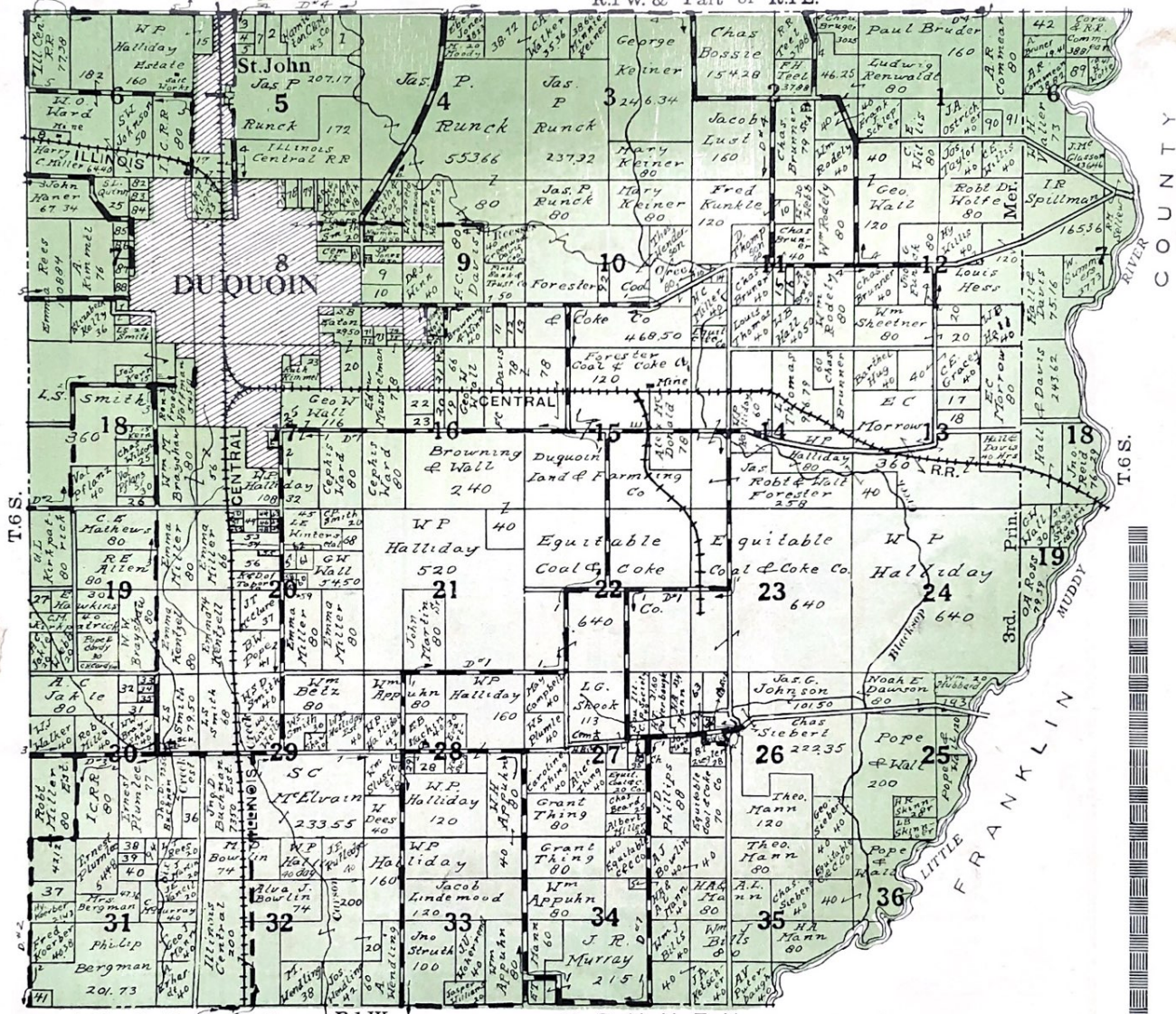
We Are a Member of The Federal Reserve Bank

MAP OF Township 6 S. Range 1

Scale: 1 1/4 inches to 1 mile
West and part of 1 East of 3rd P. M.
PERRY COUNTY, ILLINOIS

21

Improved Roads Shown thus: ———— Schools Shown thus: Churches Shown thus:
Rural Routes Shown thus: ———— Cemeteries Shown thus:
Where Rural Routes run over Improved Roads, they are denoted by arrows thus:
R.1.W. & Part of R.1.E.



List of Small Property Owners in this Township Shown on Map by Numbers.

No.	Name.	Acres.	Sec.	No.	Name.	Acres.	Sec.	No.	Name.	Acres.	Sec.	No.	Name.	Acres.	Sec.
42.	R. D. Wolf	19.41	6	22.	J. G. Davidson	22	16	47.	C. & A. Thing	2	20	71.	E. Musselman	3.40	9
59.	F. T. Teel	19.41	6	23.	E. J. Scott	8	16	48.	Carl McMurry	2	20	72.	A. Beeler	3.40	9
Twp. 6 S. R.1.W.															
1.	B. W. Pope	29.34	5	24.	Greenwood Davis Coal Co.	2.9	16	49.	Carl McMurry	2	20	73.	M. Jones	6.35	9
2.	J. H. Gregory	34.15	5	25.	Thos. Mifflin	6.06	17	50.	R. T. McAllister	2	20	74.	E. V. House	2.2	9
3.	B. F. Whitelide	4.65	5	26.	Thos. Mifflin	6.06	17	51.	R. T. McAllister	2	20	75.	E. Collins	4.45	9
4.	Mrs. Harry Knight	6.75	5	27.	Thos. Mifflin	6.06	17	52.	Peter Sattler	2	20	76.	J. Alexander	2	9
5.	J. G. Wilson	5.50	5	28.	Thos. Mifflin	6.06	17	53.	M. E. Varum (s. pt.)	6	20	77.	A. Graf	2	9
6.	Wm. Cox	10	5	29.	Thos. Mifflin	6.06	17	54.	Philip Schumke (s. pt.)	15	20	78.	M. C. Harris	10	8
7.	Illinois Cent. R. R.	10	5	30.	Thos. Mifflin	6.06	17	55.	Robert Zelder	2.06	20	79.	John Kunkel	13	8
8.	Thos. Howell	20	9	31.	Thos. Mifflin	6.06	17	56.	R. T. McAllister	2	20	80.	E. N. Berry	2	8
9.	Jas. Gatz	18.50	9	32.	C. N. Ferrells	15	30	57.	John Batley	4.75	20	81.	R. H. Sellow	55	8
10.	Edward Greenwood	10	9	33.	R. Quigley	4.5	30	58.	J. L. Richerson	2.38	20	82.	Geo. Fritz	5	8
11.	A. P. Hammond	10	9	34.	C. H. Cardy	5	30	59.	Wm. Chambers	2.38	20	83.	A. Fritz	5	8
12.	P. B. Willington	10	9	35.	C. M. Flynn	5	30	60.	A. Mezeo	5	20	84.	A. DeLorrie	10	7
13.	J. Cook	10	11	36.	G. O. Sharp	20	30	61.	E. R. Ford	10	20	85.	Stecher & Stemle	10	7
14.	J. C. Selbert, Agnes Bruner	10	11	37.	Fred Koerber	21.42	31	62.	Hugh Harris	2	20	86.	S. B. Ward	9.66	7
15.	C. C. McClure	9.50	11	38.	E. Plumlee	7.40	31	63.	J. D. Campbell	3.25	20	87.	P. N. Pope Est.	15	7
16.	Edridge, Jas. and Wm.	20	13	39.	G. Miller	5.00	31	64.	W. Simpson	2.75	20	88.	A. J. Schleyer	20	7
17.	C. C. Edridge	20	13	40.	B. Bergman	15.74	31	65.	E. B. Stickle	2	20	89.	L. Renwaldt	25	1
18.	E. Jeremiah	12	16	41.	Harriet Beard	4	31	66.	W. H. Johnson	2.65	20	90.	R. Bailey	11.50	10
19.	E. Jeremiah	12	16	42.	Chas. Smith	2	31	67.	G. Velburg	2	20	91.	C. Thing	20	25
20.	J. Jeremiah	5	16	43.	Joe Schramick	2	31	68.	B. Pyle	1.50	9	92.	A. D. Adkins	11.77	31
				44.	Wm. Vanell	2	31	69.	S. Clark	1.50	9	93.	Ninckley	7.50	27

FLOWERS AND PLANTS IN SEASON FOR ALL OCCASIONS

GIVE US A TRIAL ORDER

We are members of Florist Telegraph Association

Ship Flowers to all parts of U. S. or Canada
By Wire.

YOUNG MAN WHEN WORDS FAIL YOU
SAY IT WITH FLOWERS

WM. L. THILL
DU QUOIN, ILLINOIS

DEPENDABLE SERVICE

FOR

DEPENDABLE PEOPLE

DU QUOIN STATE BANK

DU QUOIN, ILL.

"Make this bank your business HOME."

W. A. NESBITT

EAST SIDE SQUARE

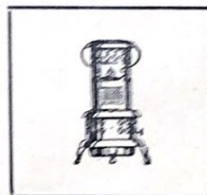


DRY GOODS,
NOVELTIES,
READY-TO-WEAR,
SHOES

Sturdy school boys' and girls' Shoes, strongly built of soft, pliable leather, that gives good service.

Good styles, correctly fitting—always below other store prices.

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GRUNER HARDWARE CO.

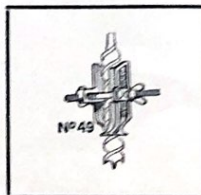
HARDWARE, HOUSE FURNISHING
GOODS; AUTOMOBILE ACCESSORIES
AND KINDRED LINES

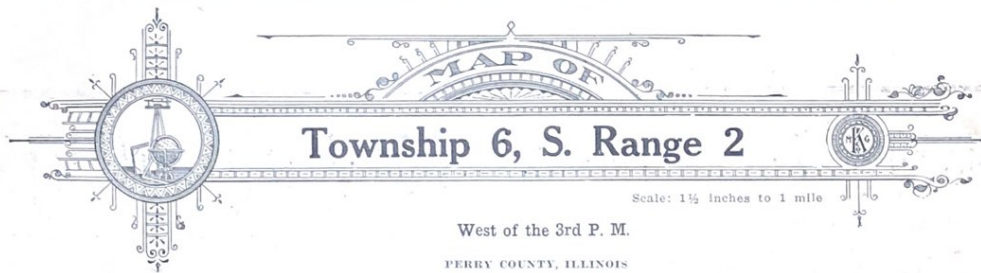
We Meet or Beat all Mail Order House Competition

NORTH SIDE OF SQUARE

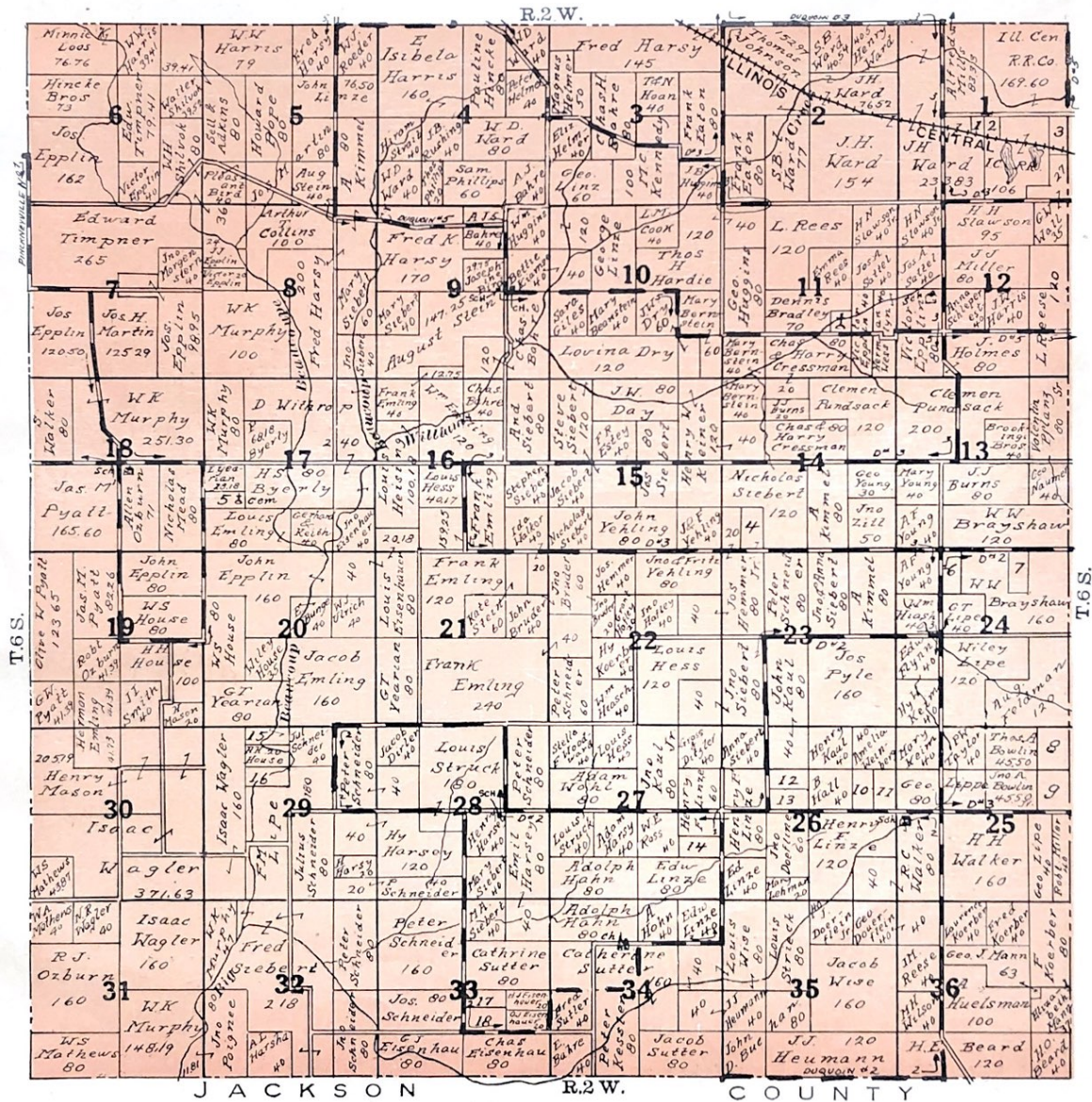
Phone No. 28

PINCKNEYVILLE, ILLINOIS





Improved Roads Shown thus: ——— Schools Shown thus: Churches Shown thus:
 Rural Routes Shown thus: - - - - - Cemeteries Shown thus:
 Where Rural Routes run over Improved Roads, they are denoted by arrows thus:



List of Small Property Owners in this Township Shown on Map by Numbers.

No.	Name.	Acres.	Sec.	No.	Name.	Acres.	Sec.	No.	Name.	Acres.	Sec.	No.	Name.	Acres.	Sec.
1.	E. A. Schmidt	4	1	5.	W. S. House	11.92	17	10.	Abble Byers	20	20	15.	Robert Ozburn	20	29
2.	E. E. Schmidt	6.75	1	6.	Jos. Napier	20	24	11.	Harley Gibner	20	20	16.	Peter Schneider	20	29
3.	Mfg. Fuel Co.	20	1	7.	A. Kimmel	20	24	12.	John N. Siebert	20	20	17.	Henry Eisenhauer	20	33
4.	Peter Schneider	20	14	8.	A. C. Walker	34.22	25	13.	Alvin Siebert	20	20	18.	Ocar Eisenhauer	20	33
				9.	R. C. Walker	34.22	25	14.	Adolph Hahn	20	20				

THE FIRST NATIONAL BANK

WILLISVILLE, ILLINOIS

Established 1916

Total Resources \$220,000.00

THE OBJECT OF BANKING

Is to provide safety for money and convenience in attending to financial transactions.

These features are well brought out in the service of this Bank, as indicated by our total resources, successful experience and conservative methods, together with its established policy of furnishing every modern facility and placing the best interests of our customers ahead of every other consideration.

Small as well as large accounts are invited. Interest paid on Savings and on Time Certificates of Deposit.

E. A. BROWN, President,
T. J. SMITH, Vice-President H. F. SCHMITT, Cashier,
ORA G. BRADLEY, Asst. Cashier.

LARGE MONUMENTS

In the yard to select from, and as many small heads and marks.

Fine large all hammered monuments, suitable for family lots.

If you are interested and want the best at reasonable prices, you should place your order with us now.

Come and inspect our fine line of monuments. We will not call on you unless you ask us to call.

RANDOLPH MONUMENTAL WORKS

STEELEVILLE, ILL.

A GENERAL LINE OF MERCHANDISE

AT THE

WEST END GROCERY

PINCKNEYVILLE, ILLINOIS



PROMPT AND COURTEOUS TREATMENT



**SELL EVERYTHING AND KEEP
NOTHING**



E. C. LATOWSKY, Prop. Phone 88, Pinckneyville, Ill.

W. R. HAYES, Pres.

C. H. WEINBERG, Sec'y-Treas.

ESTABLISHED 1862

Du Quoin Bottling Company

(INCORPORATED)

—Manufacturers of—

SODA WATERS, GINGER ALE, ETC., GLASSWARE AND
FOUNTAIN SUPPLIES

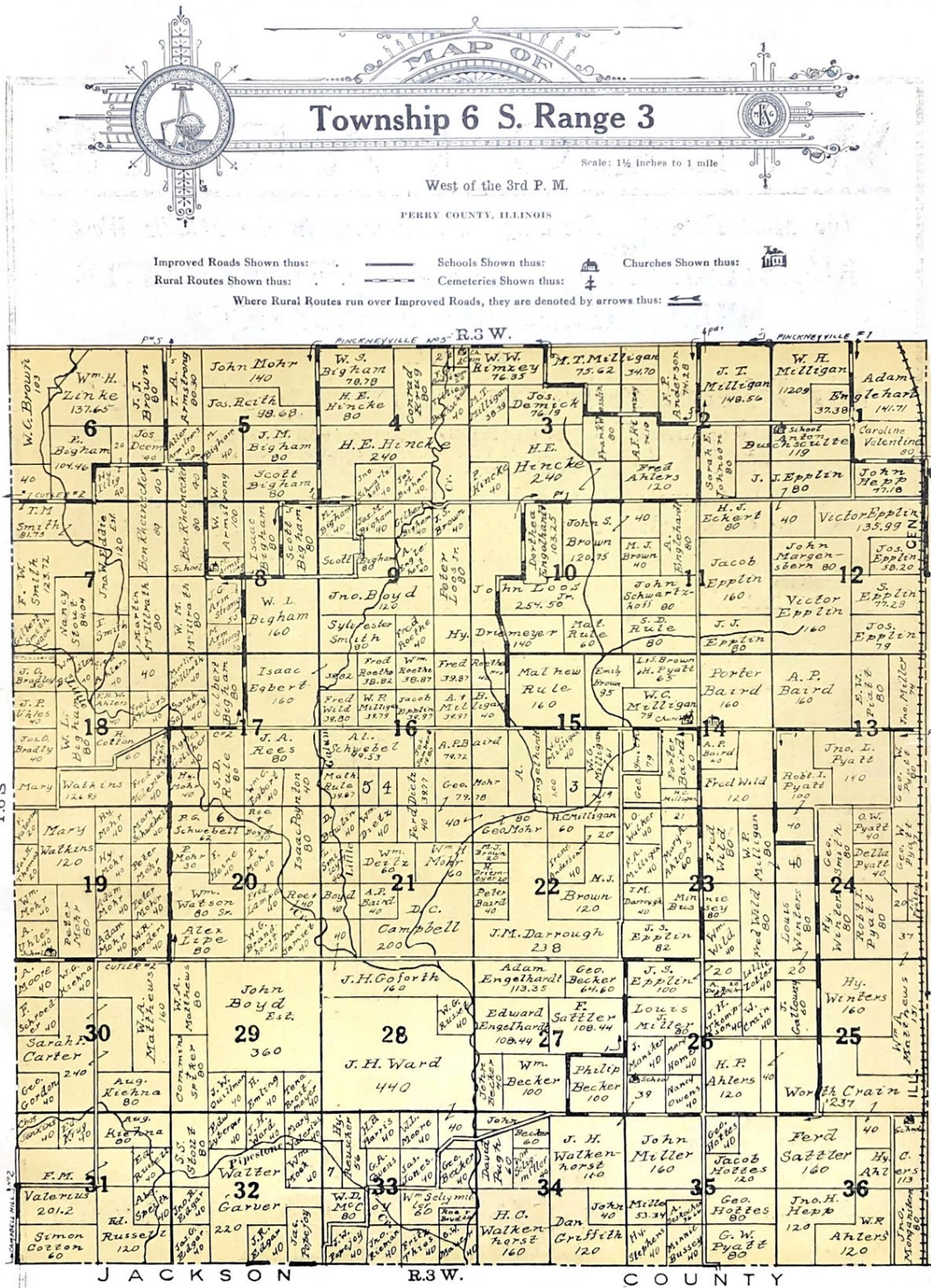
**PERFECTION ICE CREAM
PERFECTION BUTTER**

—and—

BOTTLED COCA COLA

Highest Price Paid For

BUTTER FAT



List of Small Property Owners in This Township Shown on Map by Numbers.

No.	Name.	Acres.	Sec.	No.	Name.	Acres.	Sec.
1.	W. S. Bigham	3.5	4	4.	Irene Anderson	19.80	16
2.	C. Rule	10	4	5.	A. & R. Milligan	19.00	16
3.	A. Engelhardt	20	15	6.	Geo. Schwabell	18	20
				7.	Wm. Froenling	25	33

WILCO FARMS

The Most Extensive Breeding Establishment in the Middle West

**REGISTERED HOLSTEIN and GUERNSEY CATTLE
PURE BRED DUROC JERSEY HOGS**

THE HOME OF

Sir Pieterje Maid Ormsby 176605

One of the greatest BULLS of the HOLSTEIN BREED; Wonderful Size and Individuality and Backed by a long list of HIGH PRODUCTION RECORDS on both sides of PEDIGREE. Assisted by Two other Great Sires,

19th Spring Farm King Pontiac 6th 182730

Sir Colantha Ormsby Forest Dekol 162268

Practically all of our cows have A. R. O. Records, both 7-day and Yearly.

**HIGH CLASS Young Bulls and Bull Calves FOR SALE at Reasonable Prices.
SPECIAL REDUCTION TO PERRY COUNTY and SOUTHERN ILLINOIS.**



**JOHANNA
BARNUM
MECHTHILDE**

No. 105553

Half sister to Finderne Pride Johanna Rue, who made the World's Record with almost 1500 pounds of butter in 365 days. She has 14 sisters who average 29 pounds of butter in 7 days, 4 of them made 34 1-2 pounds in 7 days and almost 11 gallons of milk a day.

**This is the Type of Our
Foundation Cows**

LINE BRED DEFENDER DUROCS

The Most Wonderful Family of the DUROC JERSEY BREED

Herd headed by a Son and Grandson of DEFENDER, assisted by other Great Boars

Let us furnish you with a FOUNDATION HERD. WE HAVE A HERD OF 2000 HEAD.

Visitors Always Welcome

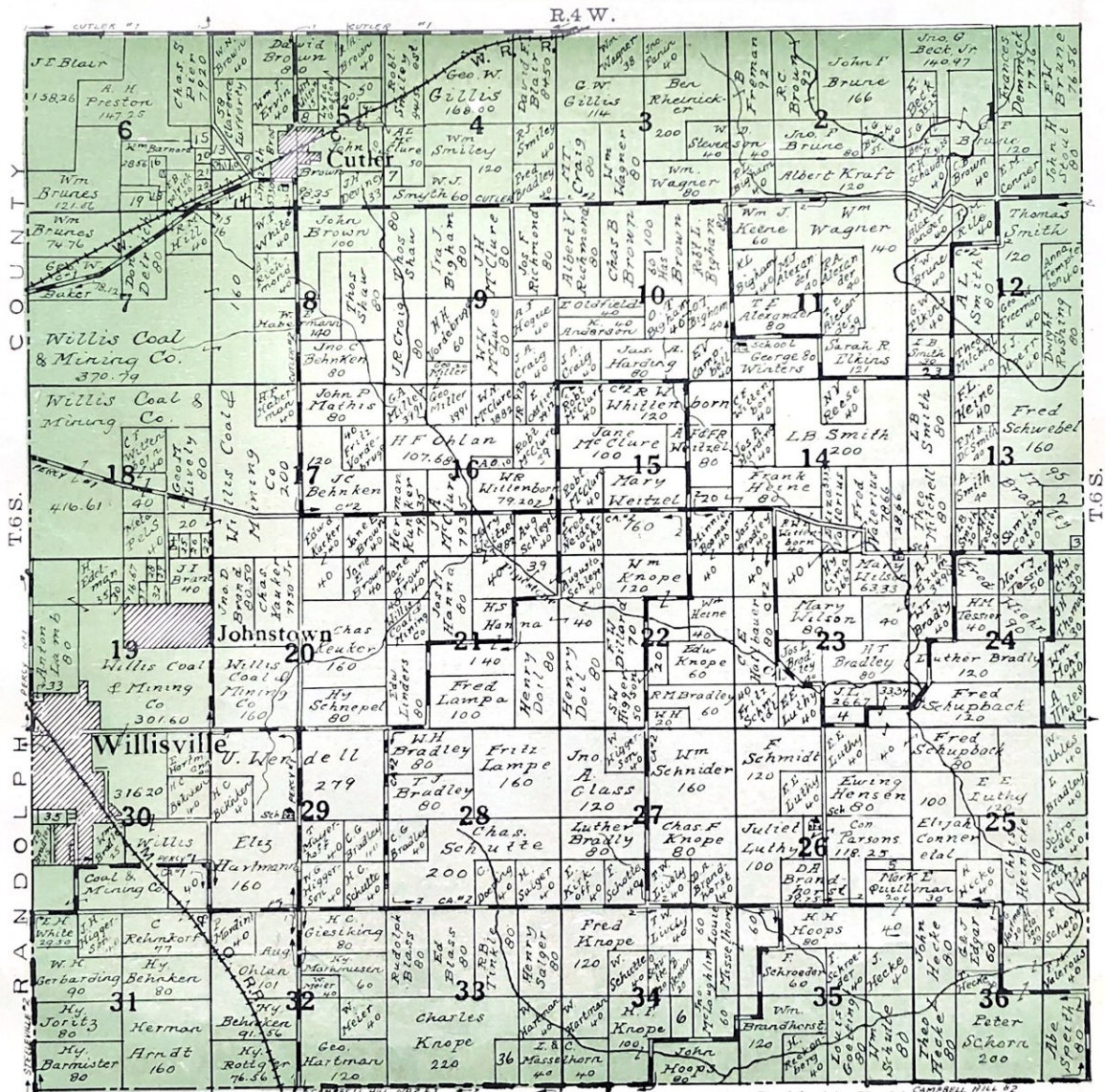
Address all Correspondence

WILCO FARMS
WILLISVILLE, ILLINOIS

W. R. HALE, Manager

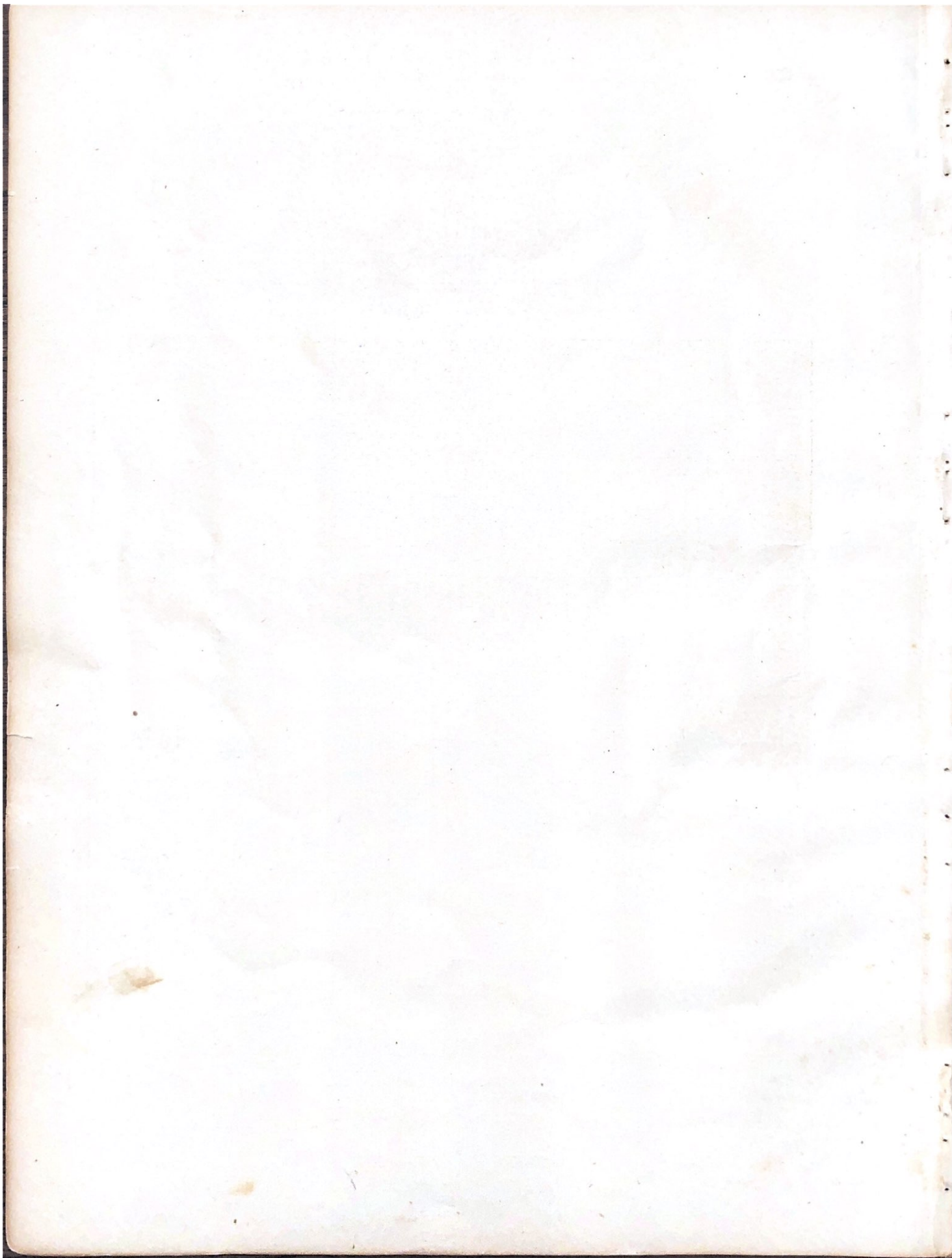


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List of Small Property Owners in this Township Shown on Map by Numbers.

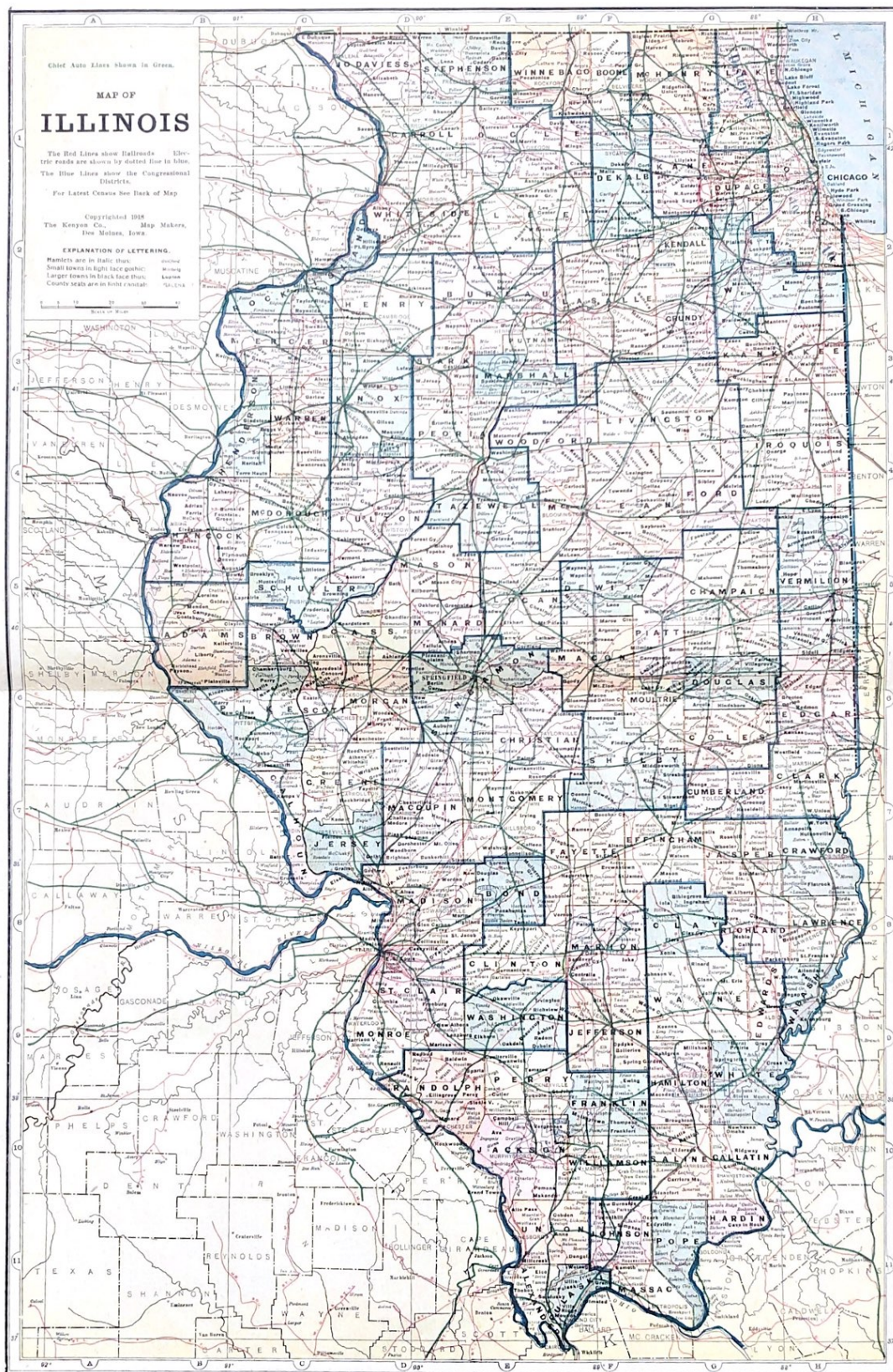
No.	Name.	Acres.	Sec.	No.	Name.	Acres.	Sec.	No.	Name.	Acres.	Sec.	No.	Name.	Acres.	Sec.
1	J. O. Bradley	19	13	9	H. Courtney	5	5	15	W. H. Lewis Est.	9.10	6	28	Albert Kilgore	5	19
2	J. B. Davis	5	13	10	G. Eldridge	3.48	5	16	Emma Detrick	15.8	6	29	Frank Miller	5	19
3	Eliz. Lybarger	20	13	11	W. H. Lewis	2	5	20	Jos. Hardy	4.90	6	30	Noah Dameron	5	19
4	H. C. Tanager Heirs	8	20	12	J. Wasson	3.48	5	21	Jno. Stevenson	4.90	6	31	M. Howalski	3.33	19
5	V. McLaughlin	20	34	13	Jos. Hardy	7.48	5	22	Jos. Stevenson	4.90	6	32	Alex. Barber	10	19
6	John Brown	10	20	14	Clarence Lafferty	40	5	23	N. J. Reese	10	12	33	Jas. Harrison	1	19
7	M. Harding	5	5	15	J. L. Brown	11	6	24	Chas. Bradley	5	18	34	Willis Coal Mining Co.	2.33	19
				16	Wm. Kelley	10	6	25	Fred Hummel	5	18	35	R. Haberman	9.73	30
				17	A. Kelley	1	6	26	V. Salder	5	18	36	C. F. Wahlman	20	33

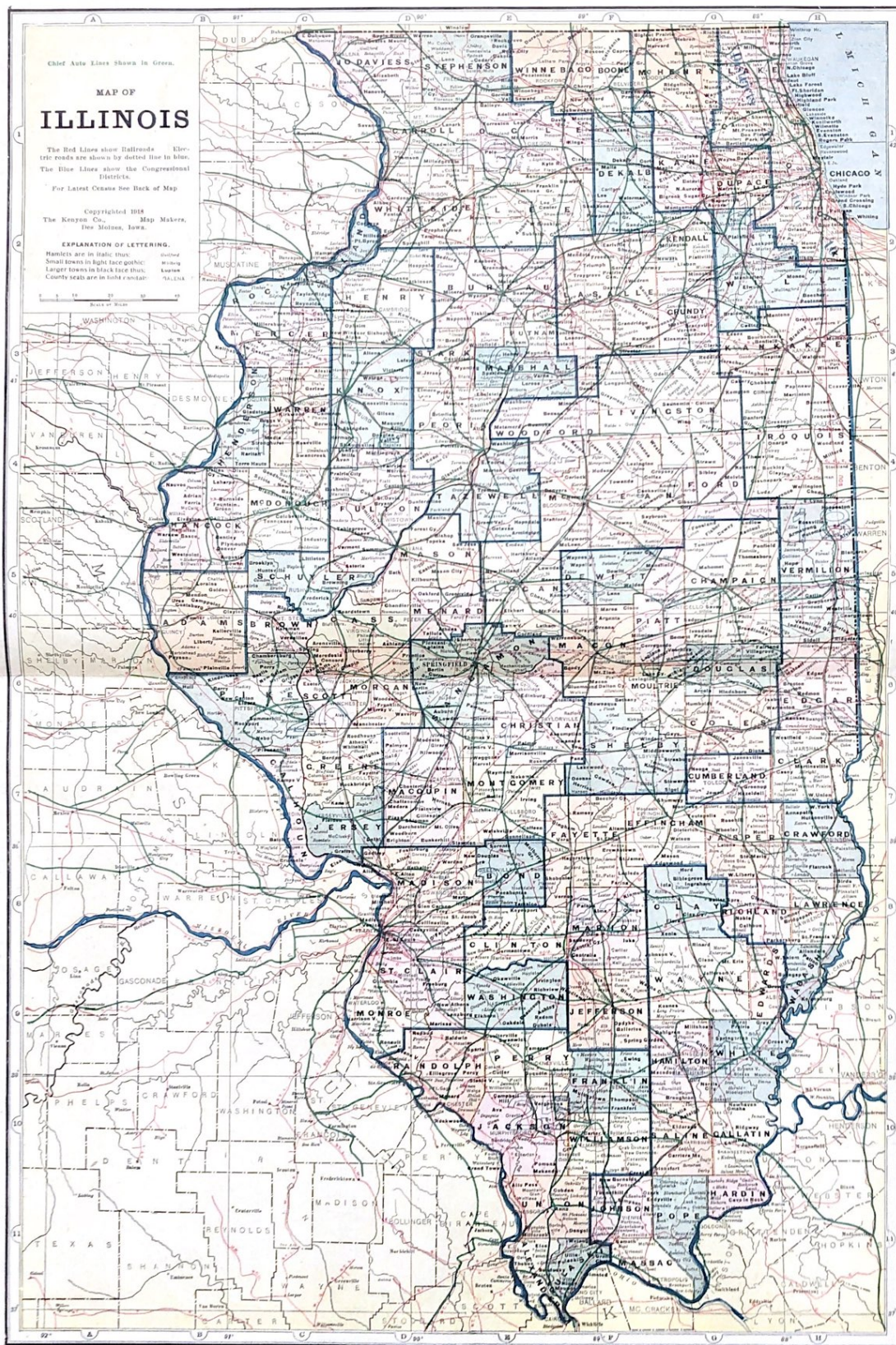


Location With Population of all Incorporated Towns in Illinois according to Latest Official Census

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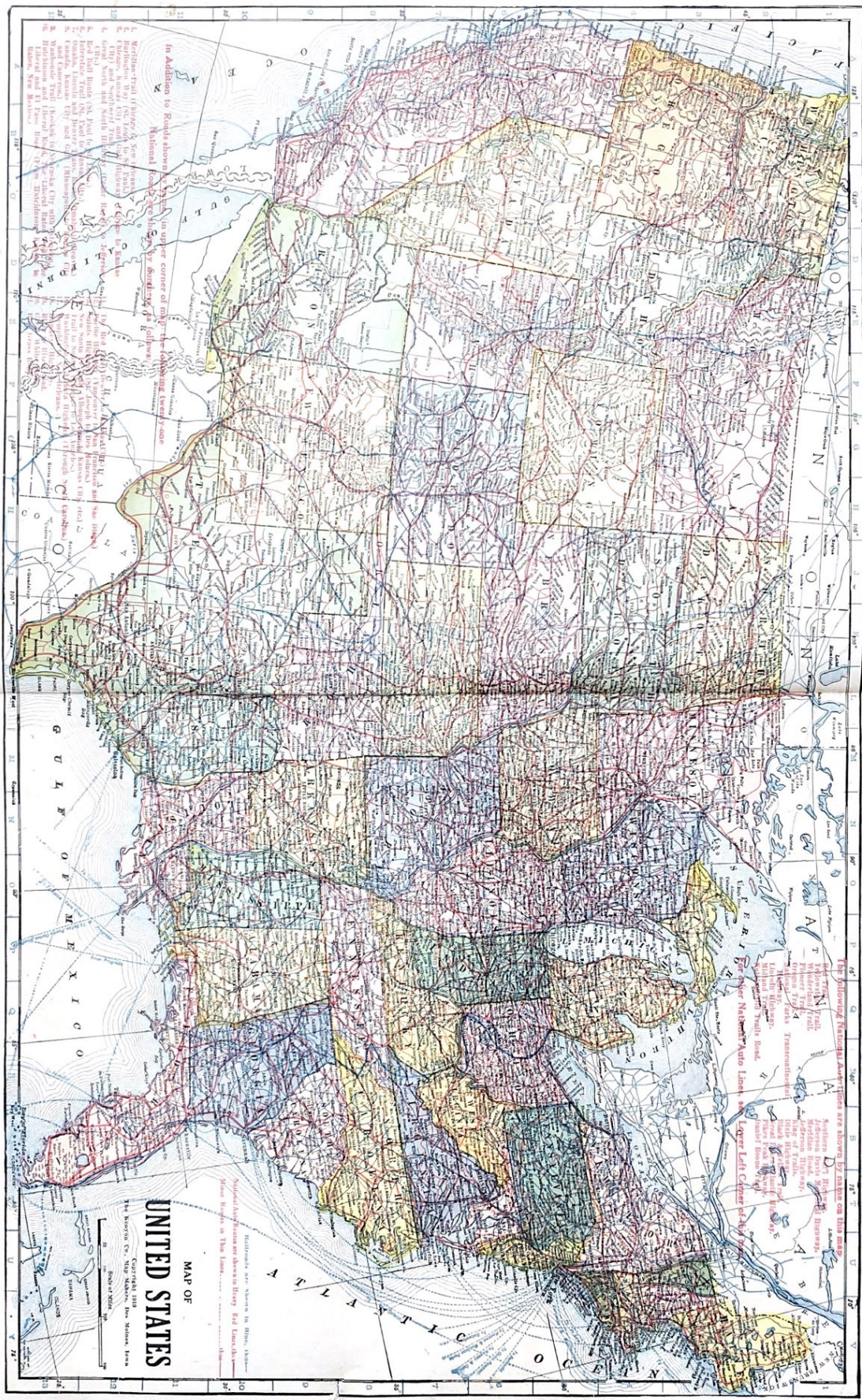


Location With Population of all Incorporated Towns in Illinois,—Continued

Town Index			Town Index			Town Index			Town Index			
Pop.	Town	Index	Pop.	Town	Index	Pop.	Town	Index	Pop.	Town	Index	
108	Montrose, G	247	108	Park Ridge, G	209	809	Summerville, G	101	Wing, G	40		
109	Monrovia, H	28	109	Parkville, G	21	810	Sunbeam, G	30	Winnebago, H	108		
132	Mora, D	32	132	Parkeville, G	91	1422	Sunbury, G	30	Winnetka, H	108		
133	Moravia, G	24	133	Parkeville, G	91	1423	Sunbury, G	30	Winnetka, H	108		
134	Moravia, G	24	134	Parkeville, G	91	1424	Sunbury, G	30	Winnetka, H	108		
135	Moravia, G	24	135	Parkeville, G	91	1425	Sunbury, G	30	Winnetka, H	108		
136	Moravia, G	24	136	Parkeville, G	91	1426	Sunbury, G	30	Winnetka, H	108		
137	Moravia, G	24	137	Parkeville, G	91	1427	Sunbury, G	30	Winnetka, H	108		
138	Moravia, G	24	138	Parkeville, G	91	1428	Sunbury, G	30	Winnetka, H	108		
139	Moravia, G	24	139	Parkeville, G	91	1429	Sunbury, G	30	Winnetka, H	108		
140	Moravia, G	24	140	Parkeville, G	91	1430	Sunbury, G	30	Winnetka, H	108		
141	Moravia, G	24	141	Parkeville, G	91	1431	Sunbury, G	30	Winnetka, H	108		
142	Moravia, G	24	142	Parkeville, G	91	1432	Sunbury, G	30	Winnetka, H	108		
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155	Moravia, G	24	155	Parkeville, G	91	1445	Sunbury, G	30	Winnetka, H	108		
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162	Moravia, G	24	162	Parkeville, G	91	1452	Sunbury, G	30	Winnetka, H	108		
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243	Moravia, G	24	243	Parkeville, G	91	1533	Sunbury, G	30	Winnetka, H	108		
244	Moravia, G	24	244	Parkeville, G	91	1534	Sunbury, G	30	Winnetka, H	108		
245	Moravia, G	24	245	Parkeville, G	91	1535	Sunbury, G	30	Winnetka, H	108		
246	Moravia, G	24	246	Parkeville, G	91	1536	Sunbury, G	30	Winnetka, H	108		
247	Moravia, G	24	247	Parkeville, G	91	1537	Sunbury, G	30	Winnetka, H	108	</	

INDEX OF ALL THE CHIEF TOWNS AND CITIES OF OVER 2,000 IN THE UNITED STATE

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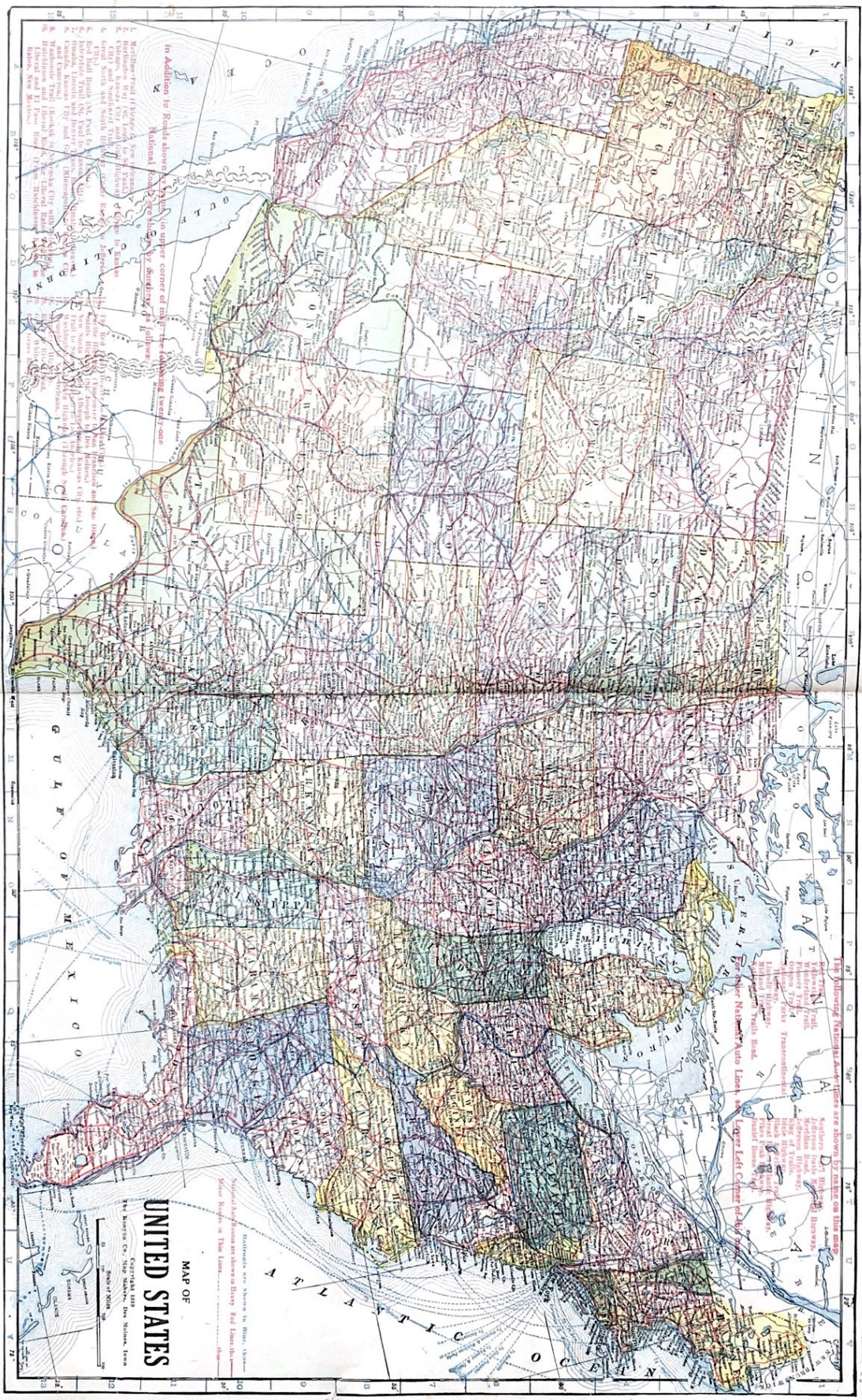


PARCEL POST SCALE

Zone	1st.	2nd.	3rd.	4th Zone	5th Zone	6th Zone	7th Zone
Rate	5¢	6¢	7¢	8¢	9¢	10¢	11¢
Weight	30	45	60	75	90	105	120
Distance	50	100	150	200	250	300	350
Rate	12¢	13¢	14¢	15¢	16¢	17¢	18¢
Weight	120	150	180	210	240	270	300
Distance	400	450	500	550	600	650	700
Rate	22¢	23¢	24¢	25¢	26¢	27¢	28¢
Weight	300	350	400	450	500	550	600
Distance	700	750	800	850	900	950	1000
Rate	32¢	33¢	34¢	35¢	36¢	37¢	38¢

When the postage on a Parcel Post amounts to twenty-five cents, a one-cent revenue stamp is required; one cent for each additional twenty-five cents or fraction thereof.

TO FIND THE RATE FOR A PARCEL.
 Measure the parcel to find its length, width, and height. Multiply these three dimensions together to find the volume. Then, find the weight of the parcel. The rate for a parcel is based on its weight and the distance it is to be shipped. The rate for a parcel is based on its weight and the distance it is to be shipped.



PARCEL POST SCALE

Zone	1st. 2nd.	3rd.	4th Zone	5th Zone	6th Zone	7th Zone
1st lb. 6¢	4¢	3¢	1st lb. 8¢	1st lb. 9¢	1st lb. 10¢	1st lb. 11¢
2nd lb. 5¢	3¢	2¢	2nd lb. 6¢	2nd lb. 7¢	2nd lb. 8¢	2nd lb. 9¢
3rd lb. 4¢	2¢	1¢	3rd lb. 5¢	3rd lb. 6¢	3rd lb. 7¢	3rd lb. 8¢
4th lb. 3¢	1¢	0¢	4th lb. 4¢	4th lb. 5¢	4th lb. 6¢	4th lb. 7¢
5th lb. 2¢	0¢	0¢	5th lb. 3¢	5th lb. 4¢	5th lb. 5¢	5th lb. 6¢
6th lb. 1¢	0¢	0¢	6th lb. 2¢	6th lb. 3¢	6th lb. 4¢	6th lb. 5¢
7th lb. 0¢	0¢	0¢	7th lb. 1¢	7th lb. 2¢	7th lb. 3¢	7th lb. 4¢
8th lb. 0¢	0¢	0¢	8th lb. 0¢	8th lb. 1¢	8th lb. 2¢	8th lb. 3¢
9th lb. 0¢	0¢	0¢	9th lb. 0¢	9th lb. 0¢	9th lb. 1¢	9th lb. 2¢
10th lb. 0¢	0¢	0¢	10th lb. 0¢	10th lb. 0¢	10th lb. 0¢	10th lb. 0¢

When the postage on a Package amounts to twenty-five cents, a one-cent revenue stamp is required; one cent for each additional twenty-five cents or fraction thereof.

TO FIND THE RATE FOR A PACKAGE.
 Measure the length, width, and height of the package, and find the cubic feet by multiplying the length by the width by the height. Then find the rate per cubic foot by dividing the postage by the cubic feet. The rate per cubic foot, multiplied by the cubic feet of the package, will give the postage. The rate per cubic foot, multiplied by the cubic feet of the package, will give the postage. The rate per cubic foot, multiplied by the cubic feet of the package, will give the postage.

UNITED STATES
 MAP OF
 THE UNITED STATES
 THE BUREAU OF THE CENSUS, 1900

INDEX OF ALL THE CHIEF TOWNS AND CITIES OF OVER 2,000 IN THE UNITED STATES

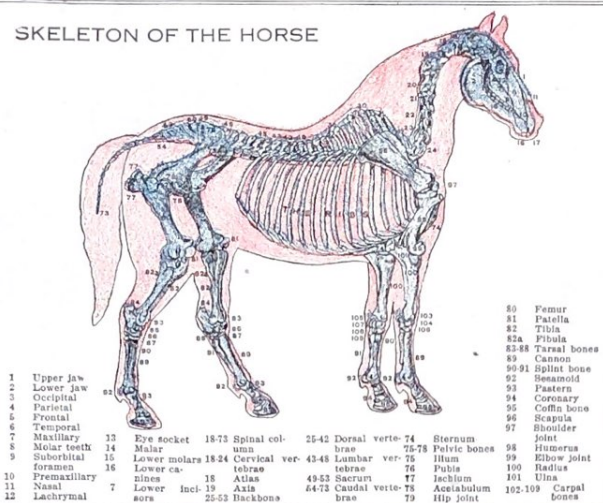
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Index Continued
on Back Page of
Map Preceding

THE HORSE IN HEALTH AND DISEASE

Physiology and Hygiene of the Horse

SKELETON OF THE HORSE



While not generally of use as a food supply, nevertheless the horse may be regarded as the most important of man's animal companions. Sharing with man the stern trust of his warfare, making intercourse with fellow men far more possible than it could be without him, decreasing man's burdens and doubling his speed, bearing the chief drudgery of agricultural labors, and contributing to his pleasures on road and track, the horse has indeed been an invaluable friend, whose health and breeding have deserved more of thought and care than generally given them. Many think that this day of motor traction, of automobile and bicycle, has ushered in the decadence of the horse; but today he brings more than ever and the call for the higher breeds was never greater.

OUR PLATES well illustrate in colors, and by their numbers and text, the bones and joints of the skeleton, the blood and breathing systems (heart, lungs, arteries and veins), the chief muscular structure, the internal mechanisms (digestive, brain and spinal systems), and the exterior anatomy of the horse. Care should be given to familiarizing oneself with all these important details.

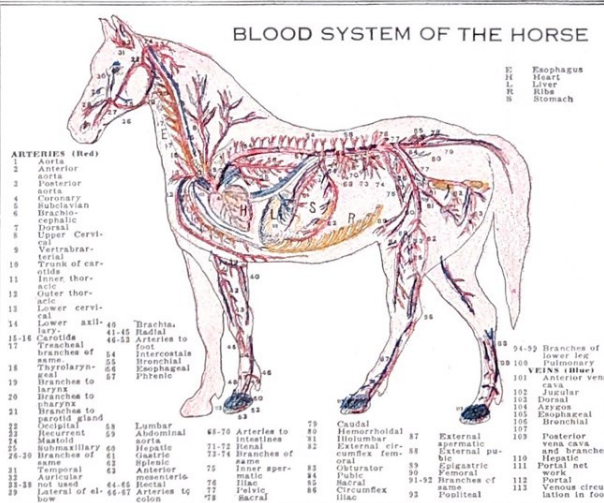
THE HEALTH AND CARE of the horse are matters calling for much study and observation. The horse in his native plains and pampas, unbridled and untamed, is naturally a healthy, sturdy animal; there is a wide choice of fresh food and an abundance of exercise assure his prime condition. The more nearly he can be kept up under like conditions, when in man's service, the nearer he will approach to perfect, normal health. Therefore, food and shelter, as with other domestic animals, are of prime importance, wisdom shown as to them being the chief preventative of the many ills to which the horse is subject. These intelligently supplied him, he needs little other care, and very seldom any medicine, for lapses in them are at the bottom of almost every trouble that visits him.

STABLING AND GROOMING are items of greatest importance in the care of the horse; the best is none too good. Stabling in roominess and, especially, in constant cleanliness, is very false economy. Clean bedding, fresh and airy stalls—box stalls are always a good investment—are of the utmost importance. Thorough grooming at regular hours is of almost equal importance. A well cleaned skin, the pores kept constantly open, are as important to the horse as to man. The health and usefulness of the horse are often much interfered with by the lack of systematic and thorough

currying and brushing. Grooming morning and night are absolutely essential for all horses at work.

FOOD AND WATER are of prime consequence to the horse in health. Poul and dirty grains, dust, amos, seeds of weeds, mean to the horse just what adulterated or filthy food means to humans. Musty hay, or

BLOOD SYSTEM OF THE HORSE



to be fed sparingly at other times. Following these, barley and rye afford variety. A diet of recent origin is of one part of alfalfa meal to two parts of corn chop; this is nutritious and economical. Forage and grain should be fed through the day; the latter at least three times during the day and the former

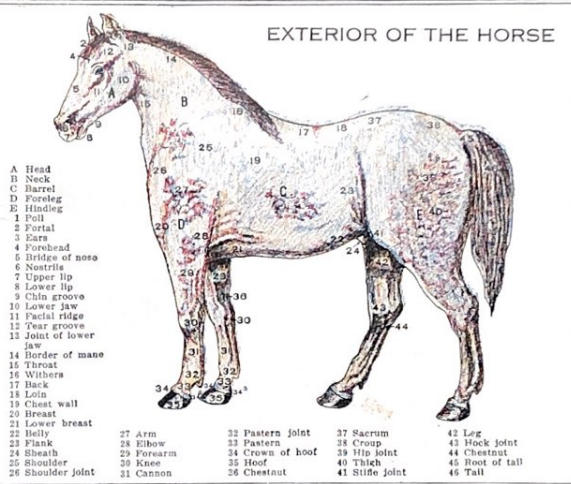
ternations of gorging, fasting and then gorging again. Serious injury, even death, sometimes will result from such treatment.

Water should be fresh drawn, or running, and its quality of the very best. To prevent washing the ration of grain too rapidly from stomach to intestines, as much water should be given before each meal as will be taken. Then a small quantity will satisfy after the feed of grain. Great care must always be taken that the horse does not indulge in an abundance of water while heated from work or driving.

THE COMMON DISEASES of the horse are, as in the case of other domestic animals, mainly due to neglect in care, stabling and feeding. Prevention of such neglect in almost all cases means a healthy and profitable horse. But when disease does appear, quick, thorough and accurate diagnosis is of the greatest importance. "Doctoring" horses is a favorite hobby with some one or more persons in every community, quite irrespective of any study or other fitness for the calling; "doctoring to death," with a superabundance of drugs—usually of the "hit everything" variety—is a very common occurrence. As in man, the recuperative powers of the horse are very great, if only hygienic conditions, with rest and time for recovery are allowed. Registered veterinarians are to be found in almost every community and the day has gone by when there was any sort of excuse for calling in the "horse quack" or "fake veterinarian." In most communities in these days when the agricultural calling has come into its long-deserved prosperity, the telephone and even the automobile are usually at hand, for the quick calling in of veterinary skill.

However, there are some ailments that it is considered safe to meet with the usual home treatments. Excellent ready-made remedies are on the market for some of these; it is, however, always well to consult the skilled practitioner, as to their relative merits before purchasing any of them. Among the commoner of these ills may be enumerated Cramp colic (spasmodic colic), Wind colic (flatulence), Diarrhoea (scours), Distemper (strangles), Lung Fever, Poundering (laminitis), Worms (broken wind), and Sunstroke. But, again it must be impressed that correct diagnosis is of the utmost importance, as the treatment for any one of these may be diametrically opposed to the actual disease, if a mistake is made, as easily it may be. Most of the above diseases, however, are quite characteristic and usually may be correctly diagnosed after a little study and experience.

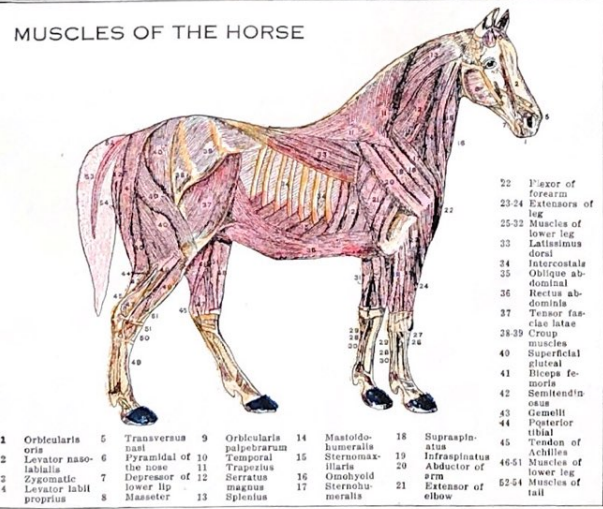
EXTERIOR OF THE HORSE



any forage, is a frequent cause of the commoner illnesses, and of some of the fatalities affecting horses. Leading the grains, oats is the natural food for the horse; corn is not suitable for very warm weather, and is

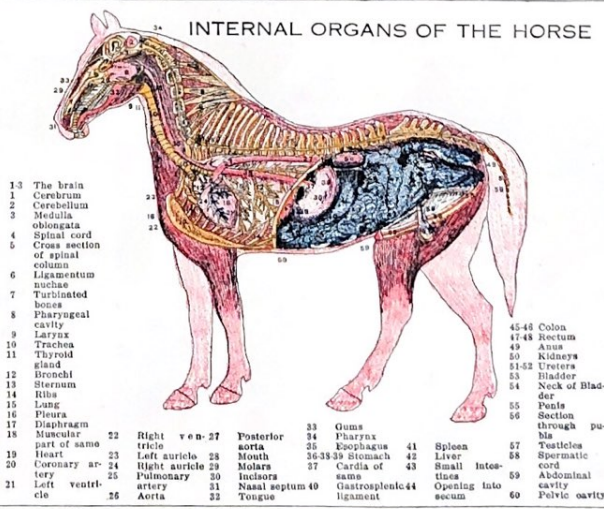
after work hours. Regularity in feeding should always be maintained. Unlike cattle, the horse is possessed of a single small stomach, and is, and is consequently not adapted for al-

MUSCLES OF THE HORSE



1 Orbicularis oris
2 Levator nasolabialis
3 Zygomatic
4 Levator labii proprii
5 Transversus
6 Nasolabialis
7 Depressor
8 Masseter
9 Orbicularis palpebrarum
10 Temporal
11 Triceps
12 Serratus
13 Splenius
14 Mastoideohumeralis
15 Sternomaxillaris
16 Omohyoid
17 Extensor of metacarpals
18 Supraspinatus
19 Infraspinatus
20 Abductor of arm
21 Extensor of elbow
22 Flexor of forearm
23 Extensors of leg
24 Latissimus dorsi
25 Intercostals
26 Oblique abdominal
27 Rectus abdominis
28 Tensor fasciae latae
29 Croup muscles
30 Superficial gluteal
31 Biceps femoris
32 Semitendinosus
33 Kneel
34 Gemelli
35 Posterior tibial
36 Tendon of Achilles
37 Muscles of lower leg
38 Extensor of tail

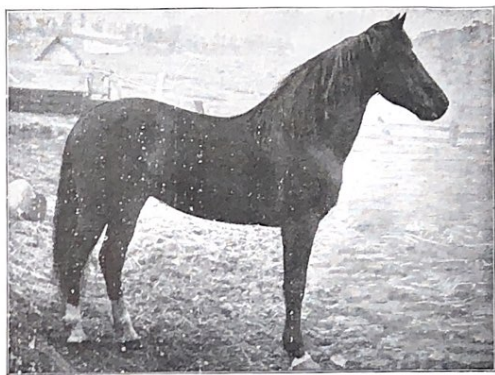
INTERNAL ORGANS OF THE HORSE



13 The brain
14 Cerebrum
15 Cerebellum
16 Medulla oblongata
17 Spinal cord
18 Cross section of spinal column
19 Ligamentum nuchae
20 Turbinate bones
21 Pharyngeal cavity
22 Larynx
23 Trachea
24 Thyroid gland
25 Bronchi
26 Sternum
27 Lung
28 Pleura
29 Diaphragm
30 Heart
31 Coronary artery
32 Pulmonary artery
33 Left ventricle
34 Aorta
35 Right ventricle
36 Tricuspid valve
37 Bicuspid valve
38 Aortic valve
39 Semilunar valve
40 Inferior vena cava
41 Superior vena cava
42 Liver
43 Gall bladder
44 Stomach
45 Duodenum
46 Jejunum
47 Ileum
48 Cecum
49 Sigmoid flexure
50 Rectum
51 Anal canal
52 Uterus
53 Vagina
54 Clitoris
55 Penis
56 Testis
57 Epididymis
58 Spermatic cord
59 Vasa deferentia
60 Urethra
61 Utricle
62 Prostate gland
63 Seminal vesicle
64 Bulbourethral gland
65 Penile urethra
66 Prepuce
67 Testicle
68 Spermatic cord
69 Vasa deferentia
70 Urethra
71 Utricle
72 Prostate gland
73 Seminal vesicle
74 Bulbourethral gland
75 Penile urethra
76 Prepuce
77 Testicle
78 Spermatic cord
79 Vasa deferentia
80 Urethra
81 Utricle
82 Prostate gland
83 Seminal vesicle
84 Bulbourethral gland
85 Penile urethra
86 Prepuce
87 Testicle
88 Spermatic cord
89 Vasa deferentia
90 Urethra
91 Utricle
92 Prostate gland
93 Seminal vesicle
94 Bulbourethral gland
95 Penile urethra
96 Prepuce
97 Testicle
98 Spermatic cord
99 Vasa deferentia
100 Urethra



GEORGE WILKES, founder of the great Wilkes family of trotters.



MORGAN HORSE, HILLSIDE, winner at Illinois State and Chicago Shows.

COMMON CAUSES OF DISEASE. Word has already been spoken of the need of accurate and prompt diagnosis of disease in the Horse. Some leading causes may be here enumerated. Copious drinking of cold water when the horse is warm, sudden chilling from rain or cool drafts, and indigestion are chief causes of Cramp Colic, or Spasmodic Colic. Overfeeding with green food, notably new hay or grain, indigestion, and overdrinking when warm, cause Wind Colic, or Flatulence. Overeating, especially if following overexertion and sudden cooling, when standing unblanketed or from too much cold water while overheated, or by cold drafts in stables, cause Founder, or Laminitis. These are the principal food and drink diseases from over-indulgence.

Mouldy, sour food, impure water, damp quarters, and indigestion and infection due to bad teeth cause Diarrhoea, or Scours. Impure stagnant water, poor pasture, mouldy or late cut hay, and general debilitation result in Worms. These are the principal diseases of impure food or water. A catarrhal infection, caused by catching cold, especially during severe storms, and general debility from insufficient or improper food, is Distemper, or Strangles. Overtaxing strength, general debility, insanitary quarters, sudden chill from drafts on certain parts of the body, notably the flanks, cause Lung Fever. These are the principal diseases of the air-passages due to exposure and a run-down condition. Heaves, or Broken Wind, is another of this class, usually found in constantly used draught horses, especially among the hard pullers in teams, where an over supply of coarse food is given. Properly cared for, horses should never have heaves.

PROMINENT SYMPTOMS of those diseases of the Horse that may usually be first met by home treatment are as follows: Sudden uneasiness, quick almost frightened looking back toward the flanks, restless pawing, sudden lying down and as abrupt getting up again, rolling rapidly and in a frightened manner, apparent straining for urination (often mistaken for some kidney or bladder disease) and a general condition of alarm coming on suddenly, but relieved by periods of entire ease, tell of Cramp or Spasmodic Colic.

Much the same symptoms at first, but coming on slowly, with only slight uneasiness, the horse appearing stupid and dull, slow, difficult breathing with often profuse sweats, trembling legs and a staggering walk, with the belly distended like a drum are the symptoms of Wind or Flatulent Colic. The two forms of Colic are best diagnosed by the suddenness of the seizure from Cramp Colic and the greatly distended belly in Wind Colic.

Troubles in the breathing apparatus usually indicate Lung Fever, Distemper, or the Heaves. The spasmodic breathing of the latter, the air being taken in naturally, but being expired (driven outward) with two spasmodic efforts, often with a short grunt or cough, characterizes and easily identifies the Heaves. Legs wide-spread, head hanging low, wildly staring, frightened eyes, tail becoming dull, sunken, almost glassy, high fever, a pounding pulse, rapid breathing, deep-colored urine and a tendency to constipation, all speak loudly of Lung Fever (pleuro-pneumonia). This calls for the quick summoning of the skilled veterinarian. The symptoms of Distemper in animals, much alike in all, are too well known to call for description here. Running from the nose and eyes, accompanied by a short, dry, barking cough are very characteristic symptoms of Distemper.

The common intestinal troubles are Founder, Worms, and Diarrhoea, or Scours. The former is easily told by the stiffness and lameness of the victim, hot, dry feet, very evident acute suffering, absolute inability to travel or even to move in bad cases, and suppuration of the foot membranes in the final fatal stages. Here, also, the skilled practitioner should be had with all speed. There is not the apparent need of immediate relief in Worms, as in the foregoing. The early stages partake somewhat of the appearance of the Colic; nervous switching of the tail, rubbing its root against fences and trees, a hide-

bound, pot bellied appearance, with no shedding of the coat when curried, all tell of the presence of parasitic Worms. Loose bowels, emaciation, great weakness and weariness, with often very watery passages indicate Diarrhoea, or the Scours.

In the hottest weather the Horse, hard working in the field or rapidly driven along the road, may stop suddenly, pant violently, spread his legs far apart, totter on unsteady limbs, and even drop suddenly to the ground. This is congestion of the brain, or Sun-stroke, and is very apt to result in early death, if the case be a severe one and aid be not quick at hand. With the head low between the forelegs, bulging eyes, the pupils smaller than usual, dilated nostrils and panting sides, violently sweating but irregular pulse, strong then weak, Sun-stroke is easily diagnosed.

INJURIES, WOUNDS, AND LAMENESS are too diverse in their manifestations for us to describe all the intricate details here. They can be sufficiently indicated under the various methods of treatment to follow. Most of them are of slight importance and respond readily to home remedies and careful nursing.

ORDINARY HOME REMEDIES for the Horse are those for the diseases above described and for the injuries and wounds of common occurrence. They will be taken in the order, already used in the foregoing diagnostic description.

CLAMP OR SPASMODIC COLIC calls for the earliest possible relief. A heavy dose of Jamaica ginger, or even of a half pint of whiskey, in hot water is quite sure to give temporary and welcome aid. Follow either of these with an ounce of sulphuric ether, hourly for three or four hours. If good results are had follow with a pint of raw linseed oil. A rectal injection of warm soapy water is advised by some. Follow these with two tablespoonful of aromatic spirits of ammonia, every hour for three or four times. If, after the administration of the sulphuric ether good results are not manifest, hasten the coming of the veterinarian.

WIND COLIC OR FLATULENCE. For the first treatment give a tablespoonful of common baking soda and an abundance of powdered charcoal. Follow with a good strong physic: a pint of raw linseed oil, or an ounce of aloes. A rectal injection of two ounces of turpentine in eight ounces of the raw linseed oil will usually produce excellent results. Aromatic spirits of ammonia, two tablespoonful hourly for four or five doses, with blankets wrung out in very hot water, applied every ten minutes over the loins, is a treatment also highly recommended. **THE HEAVES, or Broken Wind,** is not entirely curable;

the vapor, arising from hay in boiling water, produce excellent results, care being taken to avoid chilling afterwards.

FOUNDER, or Laminitis, more than almost any disease of the Horse, calls for the ounce of prevention that will render the pound of slow relief unnecessary. Immediately upon discovering that a horse is foundered he should be made comfortable in a warm, dry stall. Hot water applications to the feet for eight hours, or so, are called for in case of their slight congestion; if, however, congestion is considerable the feet should be kept in a bath of cold water for several hours. Bran mashes and ample cold drinking water for at least a week are called for; and for four or five days swabs of cloths, freshly wet half-hourly with cold water, should be kept on the feet. A horse should be used lightly and carefully for quite a month after foundering.

WORMS call for building up the system, quite as well as for the ejection of these parasites. A good, strong tonic, or some first-class condition powder is required for this purpose. First give a good drench; three ounces of raw linseed oil in which is one ounce of turpentine is excellent. Follow this with an ounce of aloes, and repeat both doses twice daily for three to five days. An infusion of tobacco, used as a rectal injection often has a most helpful effect. Keep it up, until the worms are expelled.

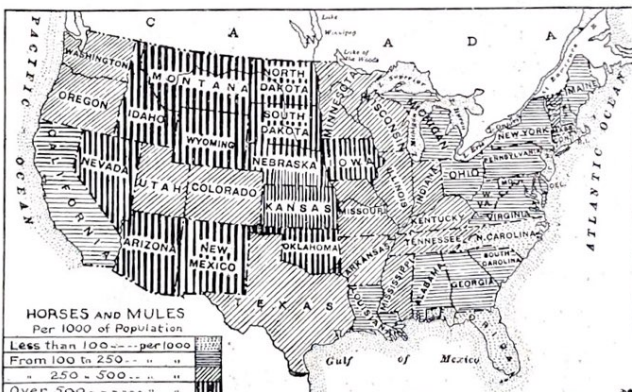
DIARRHOEA, or the Scours, call first for great care in feeding and in the drinking water. Ten grains of pulverized opium in five drachms of powdered chalk should be given every three hours. This may be followed by milder remedies, such as white oak bark tea, or unbleached wheat flour in water. Ample rest is also necessary.

SUNSTROKE. Rapid application of water, as cold as possible, thrown over the whole body of the horse, especially on the back of the head and upper spine, is first called for. Vigorous rubbings of the limbs and sides with baggery, or coarse cloths, should follow. Then repeat the douching with water. Authorities highly recommend the injection of from thirty to sixty grains of quinine under the skin with a hypodermic syringe. During the worst depression a prompt stimulant is called for; the following is highly recommended: two ounces of sulphuric ether in a pint of water, used as a drench. As well spoken of is twenty drops of tincture of aconite in a pint of ale, or beer. Afterwards the horse should be turned out to pasture where there is ample shade; and he should not be used later in the hot sun, as Sun-stroke is most likely to easily overcome the horse once the victim of it.

LAMENESS calls for very immediate attention, and while rest is the principal factor in recovery it is a factor that should be availed of at once. The leg mechanism of the Horse is fragile, in comparison with his great strength and all that is expected of him in work. Hence it is very easy to so increase lameness, by carelessness or neglect, as to render it permanent. Gentle, but firm rubbing with a good liniment frequently aids somewhat, but amputation is the keynote to a cure.

CUTS FROM WIRE-FENCE and like injuries, should have the lacerated edges that will not readily heal trimmed away, the wounds carefully cleansed with an antiseptic wash, (carbolic acid, one part in 2.0 of water) and the wound stitched together, if at all possible. An ounce each of tar and vaseline, or a drachm of carbolic acid added makes an excellent healing lotion. Others highly recommend oiling the sore thinly with vaseline and dusting over it a powder of 1 drachm of bismuth, 30 grains of zinc oxide, and 40 grains of calomel, thoroughly mixed.

OLD SORES. While the above will answer well for fresh, clean sores, old sores, especially with proud flesh, require a stronger ointment; the following is excellent: 2 ounces of resin and 1 ounce of corrosive sublimate, thoroughly mixed, dusted on lightly, left on for 48 to 60 hours, then washed off carefully and followed by the above healing ointment. Repeat every 5 to 7 days, if necessary. Corrosive sublimate is a very dangerous poison.



but it may be so treated that the horse will be brought into such condition as to do a fair amount of work in comparative comfort. In very mild cases what is almost an entire cure will result; but the Heaves are quite sure to return with renewed violence unless great care and easy work are the horse's lot. Turned out to pasture and fed laxative food (for example) the horse will rapidly recover from a mild case. If a season of pasturing is not possible, very small supplies of water, and dry grain, with feeding of beans, potatoes, carrots, turnips, and like root crops, will be found very helpful. Periods of special oppression in breathing should be relieved by sedatives. The bowels must always be kept in free action, and the stable very clean and well aired. Clean, sweet hay should be given very sparingly and only at night.

The following is highly recommended for the Heaves by several authorities. Take a half-ounce of black antimony, one ounce each of indigo and tartar emetic, and two ounces each of elecampane, Spanish brown, and nitrate of potash; pour all into a mortar and thoroughly grind. Add three

ounces of licorice powder, mix very thoroughly and pass through a fine sieve. For three days give the horse a teaspoonful twice daily, then daily for three days, and then a dose every three days until cured.

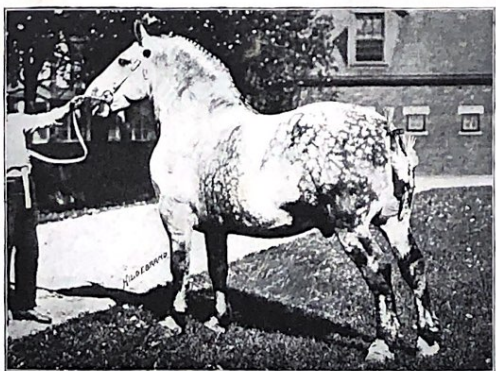
LUNG FEVER is a most serious disease and should have the early attention of the skilled veterinarian. In the meantime an equable temperature with blankets and a well ventilated but not draughty stable are of prime importance. Keep up the circulation by rubbing the legs with the hand and with applications of a hot liniment and bandage bandages, twice daily. A blanket wrung out in hot water, applied over the chest and covered by a dry blanket, changed every half hour for six or eight times will usually be found very beneficial. Bran mashes, scalded oats, and green feed, if possible, should be given.

DISTEMPER, or Strangles, calls mainly for soft food (grass, alfalfa hay, bran mashes, etc.) and for thorough protection from draughts, colds, or inclement weather. If the bowels are not free in action a handful of Glauber salts, thrice daily, is the dose for a grown horse. Where there is much discharge from the nostrils, warm poulticing of the neck, or a good steam bath from

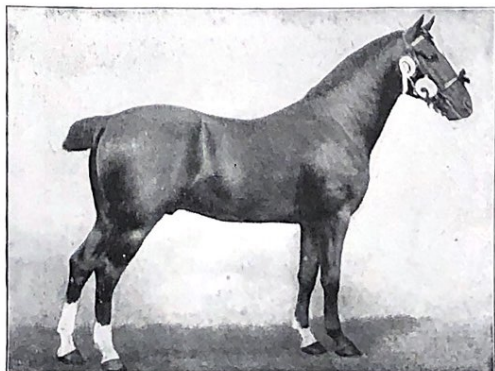
firm rubbing with a good liniment frequently aids somewhat, but amputation is the keynote to a cure.

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FERCHERON STALLION, HAUTOIS, winner at International Exposition 1911.

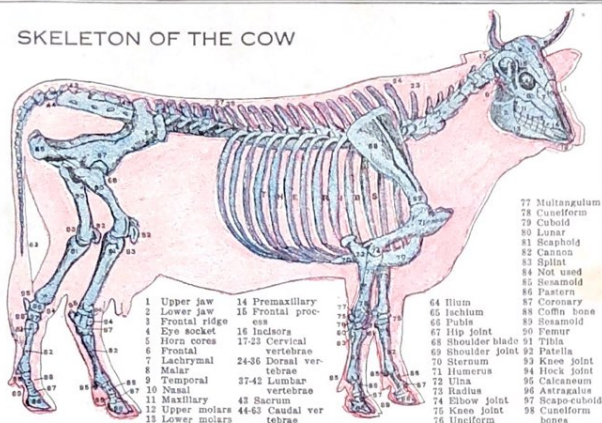


HACKNEY STALLION, ROYAL DANEGELT, winner at many English shows.

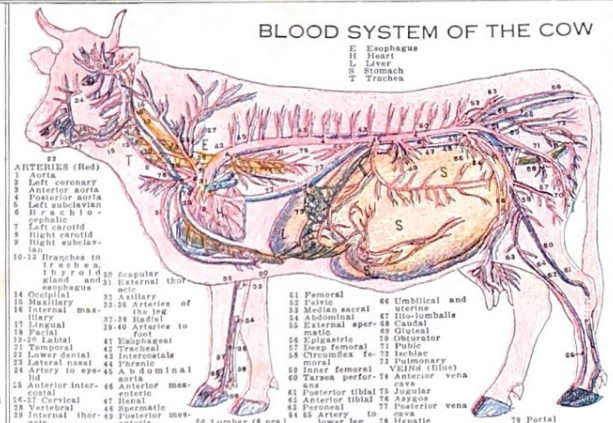
THE COW IN HEALTH AND DISEASE

Physiology and Hygiene of the Cow

SKELETON OF THE COW



BLOOD SYSTEM OF THE COW



The position of the Cow in our Nation has greatly changed during the past century. Called on in the earlier days to draw many a prairie schooner over the vast stretches of trackless wilderness and later to break that wilderness with the first furrows of the plow, today she is allowed for the most part to devote her energies alone to food production, to supplying meat, milk, butter and cheese. Always she has been among our most helpful domestic companions; today, her increase and health have as much to do with the dread question of the high cost of living as has any product of our farms. As with many such products, the day of intensive farming is dawning for the cow, and a knowledge of her structure and of her ills and allings are of prime importance to us all.

THE PLATES that are here shown graphically illustrated in colors, and by a system of numbers and their corresponding names, the bony structure, the circulatory system, (arteries and veins) the muscular mechanism, the digestive, brain and spinal structures, and the exterior, upon which the grosser outer anatomy or parts are indicated. They should be carefully studied and their various relationships be compared.

THE GENERAL CARE of the Cow must vary with the purpose for which she is being kept. Naturally, it makes considerable difference whether this be for fattening and food, for dairying or for breeding. Of fattening cattle it has been said that "a good bed is half fed," and this is very true, inasmuch as warmth and quiet combine to aid in the making of solid flesh. But of breeding stock an authority tells us to stable them as little as possible; how little must depend on the latitude, climate and season. Good shelter is a prime necessity for the dairy cow and the young, growing animal, but an open shed, away from driving winds and storms, is to be preferred to a poorly ventilated and ill-lighted stable, no matter how warm. Cold is not alone to be avoided, the intense heat of the summer sun and the irritation of flies are always detrimental, especially to the very young calf. The latter's arrival should be anticipated. The mother should have ample care in comfortable quarters, and too much solicitude cannot be shown during the early weeks of the little fellow's life.

FOOD AND WATER require much attention and careful observation, calling for constant modification. Periods of growth

alternating with a stagnation in development are to be prevented, if possible, a gradual, steady growth, maintained by food of suitable character and quantity, is to be aimed at constantly. If the calf be hand-raised, not allowed to suck its mother, care must always be had to see that the milk is of the consistency as first taken from the udder. Overfeeding the calf is as much to be guarded against as underfeeding. A small portion of oil meal added from time to time is highly recommended by

this is due to a depraved, abnormal thirst, sure to result in dire consequences in time. Pure, fresh water is necessary to growth and health, and especially to that of the dairy cow. The time of watering is not of great importance; a cow is not apt to suffer from over-drinking as will a horse. In very cold climates the intense chill of winter water may be reduced, but cool water is always the best. It can neither be too cold or too plentifully given in case of fever.

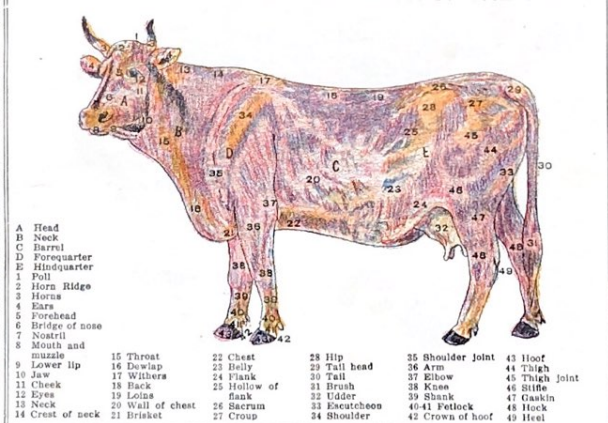
contagions and infections. The well-known adage might be changed to read, in the case of farm animals, "an ounce of prevention is worth a ton of cure," this especially applies to the first two causes, above. By painstaking care with regard to these, feeding and shelter, the stock raiser can feel assured of sound and profitable stock under almost all circumstances. In the comparatively few cases where it results otherwise, it should be remembered that an untrained person should give medicine very cautiously; and in all severe cases a veterinary surgeon should be sent for promptly.

THE COMMON DISEASES are often treated by home remedies, without the aid of the veterinarian or while he is on his way. As accurate diagnosis is, of course, of first importance, and as the diseases of cattle often baffle even professional skill at first, this is by no means a simple matter. Care must therefore be taken that the diagnosis be certain. Those troubles that are most characteristic and to be most readily diagnosed are such as Diarrhoea (scours or dysentery), Constipation (especially in calves), Malignant Anthrax (splenic fever or splenic apoplexy), Symptomatic Anthrax (black leg or black quarter), Bloat (tympanitis or hovey), and Big Jaw (lumpy jaw or actinomycosis).

All of the above are diseases that are greatly reduced in seriousness, if not entirely prevented, where care in feeding and housing are made matters of prime importance. Constipation in calves is a case in point, where the care and food of the expectant mother and a few days' care with the calf will reduce the trouble to a very small percentage. So, too, diarrhoea, or dysentery, is of the greatest danger in the young calf, where it causes great mortality. Calves closely housed are especially liable to its invasion. Regular feeding, overfeeding, hand-feeding from unclean pails, poorly ventilated, dark and damp quarters are all sources of this dread trouble. In some cases, nothing as though an infection, it carries off nearly every calf in the herd, if they are kept close together.

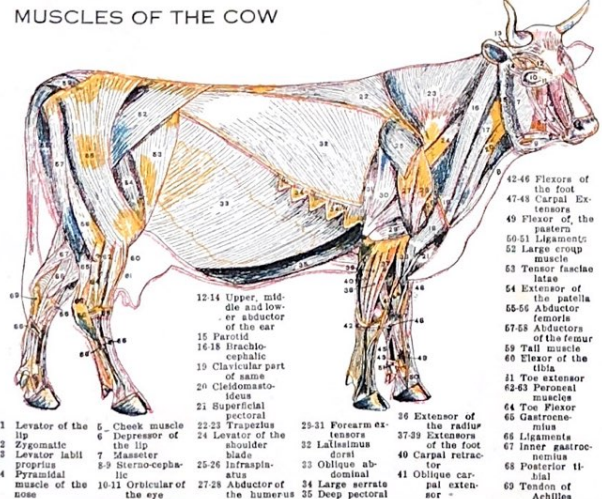
TO RECAPITULATE: An abundance of fresh air, plenty of sunlight, freedom from chilling draughts in sleeping quarters, ample, well-chosen, and pure food, and the quick isolation of any suddenly sick member of the herd, will assure a great percentage of success in cattle raising.

EXTERIOR OF THE COW

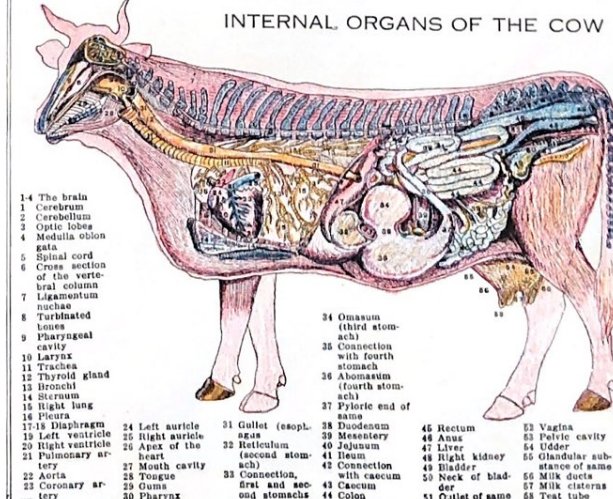


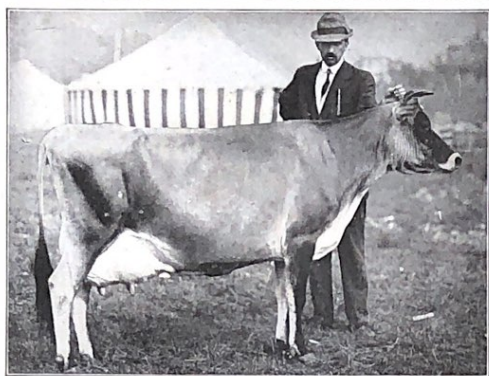
THE DISEASES OF CATTLE are usually caused by the following, here named in the order of their probable importance: 1—Careless and unwise feeding; 2—exposure to the elements and neglect of proper care; 3—the diseases of parasitic origin, and 4—

MUSCLES OF THE COW



INTERNAL ORGANS OF THE COW





JERSEY COW, BOSNIAN'S ANNA



GUERNSEY COW, GLENCOE'S BOPEEP

THE COMMON DISEASES OF Cattle, as we have already seen, are those due mainly to careless and unwise feeding, to exposure and stabling neglect, to contagion, and to parasites. Of those diseases capable of home treatment, or of immediate alleviation or of temporary relief while the veterinarian is on his way, the following symptoms may be described and classified:

SYMPTOMS OF INTESTINAL DISEASES of easy relief are of the two, entirely opposite kinds—Diarrhoea and Constipation. The former causes much anxiety among cattle raisers where it appears, as most frequently it does, among the young animals. Calves appear to be more subject to the serious inroads of this disease than do any other of the domestic animals. Dysentery, or Scours, as the disease is often called, frequently takes on the appearance of an infectious disease; and not uncommonly such a visitation attacks practically every calf in the herd. This is the more likely to be the case where the calves are closely housed together, especially in low-lying and in damp districts. Coming on suddenly, usually before the calf is ten days or two weeks old, it is characterized by very fluid and highly offensive, light colored evacuations, which become very frequent and are often accomplished only after severe straining. The poor little creature is greatly weakened, lies down most of the time, loses flesh rapidly, and shows many signs of profound distress. Deep sunken eyes, uneasy breathing, and entire loss of appetite are other symptoms. If not entirely relieved during an early stage of the disease, death will soon follow.

If, after the second or third day of its life the calf refuses to suck the mother, appears exceedingly uneasy, keeps up a more or less continuous moaning, spends much of its time prone, is constantly making futile efforts toward evacuating the bowels, breathes hurriedly and often painfully, Constipation is a pretty safe diagnosis. This is a disease that should have early expert attention, as it is not a disease that can be neglected with impunity.

BLOAT, another of the intestinal disorders, known also as Hovey, or as Tympanitis, is known by the evident distension of the abdomen and by the drum-like sound upon tapping on the distended region, which is more characteristic of the left side of the animal. Uneasiness and very evident signs of great distress, difficult breathing and nervous trembling are frequent symptoms. If not soon relieved, the sufferer will sink to the ground and death is likely to follow soon after.

THE INFECTIOUS DISEASES of Cattle are of several sorts; but we need consider only three of them here, under the topic of home treatment. Chief, and certainly the most dangerous of these, are the two forms of Anthrax—Symptomatic and Malignant. The first of these, Symptomatic Anthrax, Black Leg or Black Quarter, is due to inoculation with a bacillus and usually attacks calves from three months to two years old. The germ finds its way into the system through an abrasion or wound, often very small and inconspicuous. It is claimed that it may be taken into raw or sore air passages through the inhalation of dust containing the bacilli, or into the digestive tract with food. It is characterized by a puffy swelling, usually on a leg or quarter, or on the rump or shoulder, although the back or neck is sometimes the seat. When firmly pressed the swelling crackles; this is diagnostic. Other symptoms are marked. A desire to be alone; head extended and held low, breathing hurried and gasping, decided stiffness of joints and lameness are symptoms usually preceding the appearance of the swelling.

Malignant Anthrax, variously known as Splenic Fever, Malignant Pustule, Charbon, etc., is of all diseases of domestic animals most to be dreaded, especially as it is extremely infectious to all warm-blooded animals and at times suddenly fatal to man. In man it is commonly called Malignant Pustule, though Pulmonary or Intestinal Charbon are also common names. It is the product of infection by the *Bacillus anthracis*, which may be introduced into the system in several ways, through irritation or

abrasion of the skin or mucous membrane, through the digestive tract with food, or by being carried with the bite of a small fly, *Somomyia calcitrans*, closely allied to our common house fly and greatly dreaded around army hospitals and on fields of battle.

The first symptom is usually a sharp chill or violent rigor, a temperature of 104 degrees to 107 degrees, flushes in one bodily locality and cold elsewhere at the same time, soon to be followed by spasms, profound nervous symptoms, bleeding from the nostrils and quick-following death, preceded by abnormally low temperature. As a rule the victim of acute Malignant Pustule dies within one or two days; in subacute they may live for a week. In the latter the sores become gangrenous; a very fair sprinkling of such cases recover. The greatest care must be taken that the animal so infected does not come in contact with others of the herd and is kept from scratching against surfaces accessible to other farm animals, or to humans; or where that is likely to take place, such surfaces are immediately disinfected and kept so. Above all, flies and mosquitoes must be rigorously kept away from any possibility of reaching the sores or any discharges or offal.

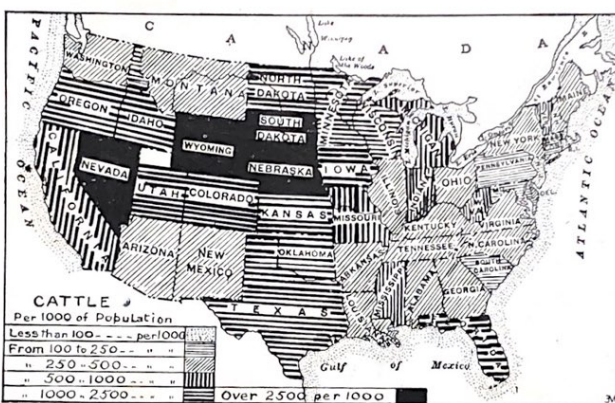
In case of death—the animal should be buried, or, still better, be buried deep in an ample bed of quicklime. Maxon, in his extensive investigations, proved that an infected carcass, buried in ordinary earth and six feet deep, after eight years was surrounded by animal decay in the loam that contained the living bacilli of Anthrax.

Another infectious disease, though in this case due to a bacterium (a germ of vegetable origin) rather than to a bacillus, is

LUMPY JAW, or Actinomycosis, Big Jaw, Wooden Tongue, and known by other names as well. While usually a disease of cattle, it affects practically all animals, humans as well as others. It usually appears in the head, hence several of its names, and is the product of the presence in the tissues of various species of fodder-plants, but especially on the grasses. Infected plants if eaten by an animal with a raw or sore membrane in the mouth, carry the germ into the system. Its infection of man has been traced to picking the teeth with a straw or spear of grass from a field where cattle had been grazing, and where discharges from their mouths or

secretes, as this is strongly laxative in its nature. The meconium (contents of the calf's intestines when born) is often retained; this is abnormal and a form of constipation to be dreaded. Warm water well mixed with sweet oil and soap, used as injection, will usually suffice to remove the meconium. Occasionally, two to four spoonful of castor oil, administered internally, may be necessary. One dose should suffice.

BLOAT, Tympanitis, or Hovey, is a disease, as already indicated, varying in urgency. In the less immediate or threatening cases, it is first important to keep the mouth open for the ready escape of the imprisoned gas, and to use some remedy to stop its formation. Take a block of wood, about three-fourth of an inch square and 8 or 10 inches long and place it far back in the mouth like a driving bit, and tie it in place with strings from each end, meeting at the back of the head. Administer ammonia water (hartshorn) in half ounce doses in a quart of water; or, what will probably be more easily obtainable, a quart of milk in which is thoroughly shaken 1½ ounces of turpentine; either of these is intended to stop the formation of the gas; the wooden bit to allow its easy escape.



intestinal canals had been dropped upon the grass. As the principal name indicates, the most common symptom is a lump on the jaw, although, as indicated by another name, the tongue is often so infected and enlarged as to hang out of the mouth in a most distressing way. The sufferer is unable to drink, even breathing is difficult, and a constant dribble of saliva running down. It may, in rare cases, appear in any part of the body and the bones may be implicated secondarily. It is a disease much to be dreaded.

THE COMMON ILLS AND INJURIES of the Cow are about the same as those of the Horse and are to be classed both in symptomatology and treatment, as treated in the matter pertaining to that animal. Colds, distempers, ordinary intestinal troubles, are to be treated in much the same way. Here it will suffice to describe the best home methods for treatment of those specialized diseases above treated of.

DIARRHOEA, Scours or Dysentery, is a disease calling more for preventive than for curative methods. A clean, well ventilated barn (above all, with plenty of sunshine) where all due attention is given to correct bedding and regularity in feeding, should not harbor the scouring calf.

If such an one there be, it should at once be removed and be isolated until cured. Do not allow calves to be crowded in close quarters, and use plenty of lime as a purifier. Reduce the food somewhat, regulate the mother's diet, see that the feeding pails are kept well scalded; a little lime may well be added to the milk fed.

After removing the patient to a point of isolation, which must be clean, warm and dry, a half cup of boiled milk may be given, to which is added two table-spoonfuls of castor oil. A cow that has been fresh for four or five months gives the best milk for such purpose. Follow this dose with another composed of 3 drachms each of spirits of camphor, tincture of opium, and dilute sulphuric acid; repeat as long as necessary in doses one to two hours apart. If the calf seems very weak, give a raw egg and about two ounces of whiskey beaten up in a pint of milk, as a tonic.

CONSTIPATION, also mainly a disease of calves, will be combated by prevention, this time in the case of the mother. In nutritious food, dry ground and sunshine, given to the mother cow, is a fertile cause. Look after her food carefully before birth of the calf, and feed the calf under all circumstances on the first milk she

secretes, as this is strongly laxative in its nature. The meconium (contents of the calf's intestines when born) is often retained; this is abnormal and a form of constipation to be dreaded. Warm water well mixed with sweet oil and soap, used as injection, will usually suffice to remove the meconium. Occasionally, two to four spoonful of castor oil, administered internally, may be necessary. One dose should suffice.

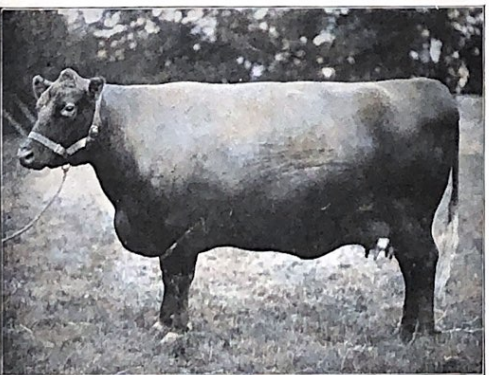
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ANTHRAX, Symptomatic, or Black Leg, is so immediately dangerous that in very many cases there is no hope. Vaccination or preventative inoculation is really the only true hope. The Federal Bureau of Animal Industry at Washington supplies an Anthrax vaccine that is thoroughly reliable and that can be had at a nominal price. Any intelligent breeder can readily follow the directions that accompany the vaccine. The State Experiment Stations also supply such a vaccine, and there are several commercial vaccines on the market. They are all administered by hypodermic syringe. Tonics and drugs are usually without any avail; they are poor dependence, at the best. As death usually results quickly, killing the infected animal is most advisable, after which deep burying in quicklime is the only safe method. All places where an infected creature has been must be most thoroughly and copiously disinfected; burning halters, all offal, pails, etc., is most advisable.

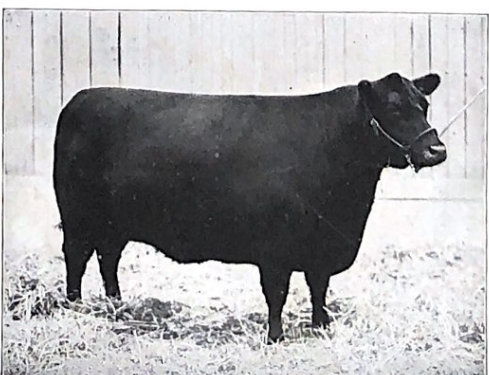
ANTHRAX, Malignant, or Splenic Fever, Charbon, or Malignant Pustule, also is a disease of such deadly virulence as to call for the prevention of vaccination and to hold out small hope for curative methods, after the event. See as to vaccines in the above section on Symptomatic Anthrax. The Carbuncular form, a milder form already described, sometimes may be cured by strong antiseptic solutions (such as carbolic acid or bichloride of mercury solutions) applied to the carbuncles, or tumors, freely and constantly. This must be supplemented by other sanitary treatment in every respect. Read the above section as to destruction of the carcass and disinfection of all surroundings and accessories.

LUMPY JAW, Wooden Tongue, Actinomycosis, etc., may often be relieved, if taken very early, by a strong blister made of mercury benzoide and powdered cantharides, in six parts of vaseline or very pure lard, preferably the former. In advanced cases liberation of the pus and insertion of caustic, such as corrosive sublimate in a capsule, may result favorably, although none too likely. In that form known as Wooden Tongue, 2 to 4 drachms of potassium iodide may be effective if continued until iodism is manifested. But this is really only a safe treatment in the hands of the skilled veterinarian.

CAUTION. It should be added and be emphasized here that, in the last three diseases here considered, the aid of the skilled practitioner should be had at the first possible moment; not alone in the interest of the suffering animal, but for the safety of other members of the herd. And too much stress cannot be put on the great importance of thorough disinfection during and after the event. Carelessness in this respect is almost criminal.



RED POLLED COW, DELPHINE

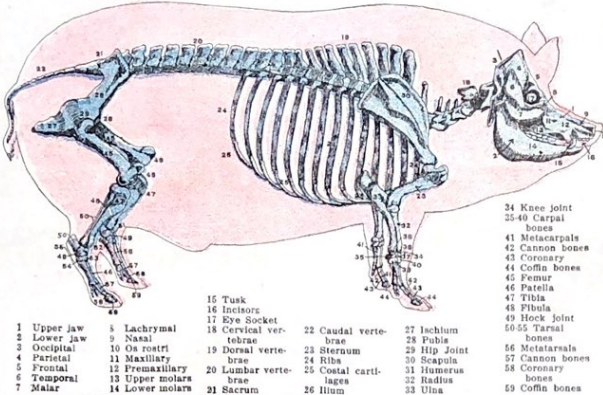


ABERDEEN ANGUS COW, VIOLET 3RD OF CANGASH

THE HOG IN HEALTH AND DISEASE

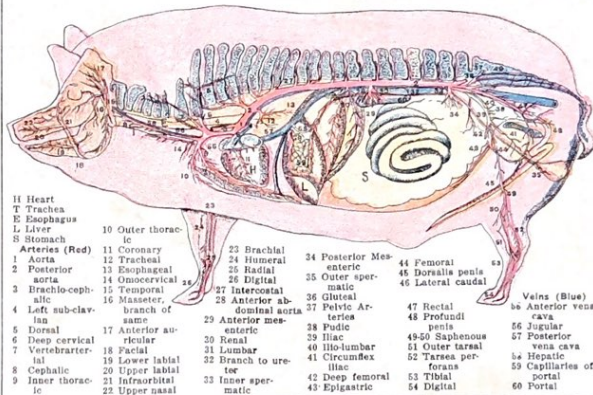
Physiology and Hygiene of the Hog

SKELETON OF THE HOG



- 1 Upper jaw
- 2 Lower jaw
- 3 Occipital
- 4 Parietal
- 5 Frontal
- 6 Temporal
- 7 Malar
- 8 Lacrymal
- 9 Nasal
- 10 Os rostri
- 11 Maxillary
- 12 Premaxillary
- 13 Upper molars
- 14 Lower molars
- 15 Tusk
- 16 Incisor
- 17 Eye socket
- 18 Cervical vertebrae
- 19 Dorsal vertebrae
- 20 Lumbar vertebrae
- 21 Sacrum
- 22 Caudal vertebrae
- 23 Sternum
- 24 Ribs
- 25 Costal cartilages
- 26 Ilium
- 27 Ischium
- 28 Pubis
- 29 Hip joint
- 30 Scapula
- 31 Humerus
- 32 Radius
- 33 Ulna
- 34 Knee joint
- 35 Carpals
- 36 Metacarpals
- 37 Cannon bone
- 38 Coracoid
- 39 Coffin bone
- 40 Femur
- 41 Tibia
- 42 Fibula
- 43 Hock joint
- 44 Tarsal bones
- 45 Metatarsals
- 46 Cannon bone
- 47 Coronary
- 48 Coffin bone

BLOOD SYSTEM OF THE HOG



- 1 Heart
- 2 Trachea
- 3 Esophagus
- 4 Liver
- 5 Stomach
- 6 Spleen
- 7 Aorta
- 8 Posterior aorta
- 9 Branchiocephalic
- 10 Left sub-clavian
- 11 Anterior aorta
- 12 Deep cervical
- 13 Vertebral
- 14 Cephalic
- 15 Inner thoracic
- 16 Outer thoracic
- 17 Coronary
- 18 Tracheal
- 19 Esophageal
- 20 Omocervical
- 21 Temporal
- 22 Masseter
- 23 Branch of same
- 24 Anterior mesenteric
- 25 Renal
- 26 Lumbar
- 27 Branch to ureter
- 28 Upper labial
- 29 Infraorbital
- 30 Upper nasal
- 31 Brachial
- 32 Humeral
- 33 Radial
- 34 Digital
- 35 Intercostal
- 36 Anterior abdominal aorta
- 37 Pelvic Artery
- 38 Pudic
- 39 Iliac
- 40 Ilio-lumbar
- 41 Circumflex
- 42 Iliac
- 43 Deep femoral
- 44 Epigastric
- 45 Femoral
- 46 Dorsalis penis
- 47 Lateral caudal
- 48 Rectal
- 49 Profundi
- 50 Jugular
- 51 Saphenous
- 52 Tarsal
- 53 Tarsal
- 54 Digital
- 55 Anterior vena
- 56 Jugular
- 57 Posterior vena
- 58 Hepatic
- 59 Portal

Anti-dating the earliest history, friend of man before the first days of hieroglyphs and picture writing, yet the Hog has only seen his great improvement and main development within the past half century. The home of maize, Indian corn, in the Mississippi Valley, where hog-fattening is most economically carried on, is the world's greatest center of the Hog's growth and advancement.

Hogs may be divided into two classes, economically: bacon producers and lard producers. Of the former, Yorkshires and Tamworths are leaders, with sometimes Chester Whites and Berkshires; the Duroc-Jerseys, Poland-Chinas, Suffolks, Cheshires, and Essex as lard producers, with the Chester Whites and Berkshires often in this class also.

The Berkshires, Poland Chinas, Chester Whites, and Duroc-Jerseys are the four most popular breeds in this country; the first of these is of English origin, the others are of American breeding.

SELECTION OF BREEDING STOCK is of utmost importance to the breeder. Says Prof. F. D. Coburn, long famous as Secretary of the Kansas Board of Agriculture: "The burden of excellence should not be placed upon the boar alone, nor solely on the sow, and it is only by a combination of the merits from both parents that the best results are had. The sows should be roomy, broad, and maternal in appearance, while the boar ought to be more compact and well built, yet none the less robust, rugged and masculine. Selection according to type is of greater importance than selection by breed. Type has to do with the constitution, capacity, and general merit of the Hog, and, whatever the breed, there are certain points that make for a good or a poor hog, as they may be found prevailing or lacking." He then indicates the principal of these, as follows:

A short, broad, concave face, wide apart eyes, usually with an upturned muzzle, speaks of a quiet disposition and strong digestive and assimilative powers; in a word, a quick-fattening and profitable animal.

A well-rounded, prominent jaw, with short head, suggests early maturity and quick feeding.

Medium-sized ears, soft and silky, indicate

high quality and light offal; the reverse, with thin skin and coarse hair, call for flabbiness and much offal waste. The erect, foxy, pointed ear, straight face, and sharp, long nose, indicate poor fattening qualities, too much nervousness, and perhaps viciousness.

A wide, deep chest goes with robustness and ample lung room, signifying hardiness and great resistance to the pig's many ills. A slightly arched back, not too long, packed with muscles (lean meat, where the

sprawling feet, results from faulty breeding and too long continued corn diet.

TOO MUCH CORN, the same authority tells us, leads to excess of fat, not only outside the muscles, but among them, causing a lack of development in them, especially along the back. Skin, hair, and blood supply are all abnormally reduced, and the spleen, liver and kidneys are unusually small. Consequently, the bone strength is reduced quite one-half. He says: "A half ton of feeding which robs the hog of half

animal. It is a long since exploded belief that a hog's natural state is one of unmentionable filth and that anything unclean is good enough to feed him. Sanitary surroundings, a pen capable of quick and thorough cleaning, a balanced ration fitted to the purposes for which he is intended—breeding, bacon or lard production, and plenty of fresh air, but shelter from inclement weather when necessary, are all important contributors to the Hog's rapid, sturdy, and profitable growth.

THE COMMON DISEASES of the Hog are, as in all farm animals, those having their main origin in neglectful housing and surroundings, and in improper food or over-eating. Given fairly hygienic surroundings and a carefully studied ration, the Hog should progress with a fair proportion of success, although it must be admitted that he is the most frail of our farm animals.

HOME TREATMENT, in the absence of the veterinarian, or while he is coming, may be resorted to in a number of ailments, principal among which are: The various Worms, Mange, Scours, or Diarrhoea, Constipation, Thumps (palpitation of the heart), Cynisey, and Inflamed Udder. It is of the greatest importance, however, that the diagnosis be accurate, and too great freedom in experimental dosing should be carefully avoided, as more harm is done by incorrect diagnosis and unwise dosing, than would have resulted in rest and quiet until the expert had arrived.

While the Hog is subject to an unusual number of diseases, it is, nevertheless, a disease-resisting animal in that it usually can wait the veterinarian's arrival.

RELATIVE FOOD COST. The authority already quoted gives the following as the relative costs of corn and live weight pork:

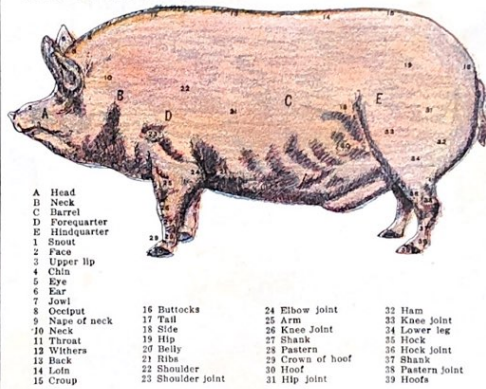
Corn at 25 to 30 cents a bushel yields pork costing 2½ cents a pound to produce. Corn at 35 to 40 cents a bushel yields pork costing 4 cents a pound to produce.

Corn at 50 cents a bushel yields pork costing 5 cents a pound to produce.

On the assumption that the net weight of hogs is 20 per cent (1-5) less than that of the live weight; or the live weight is 25 per cent (1-4) more than the net, the following is a fair rule:

To ascertain the net weight multiply the gross weight by .8; to find the gross weight divide by .8.

EXTERIOR OF THE HOG



- A Head
- B Neck
- C Barrel
- D Forequarter
- E Hindquarter
- 1 Snout
- 2 Face
- 3 Upper lip
- 4 Chin
- 5 Eye
- 6 Ear
- 7 Jaw
- 8 Occiput
- 9 Nape of neck
- 10 Neck
- 11 Throat
- 12 Withers
- 13 Back
- 14 Loin
- 15 Croup
- 16 Buttocks
- 17 Tail
- 18 Side
- 19 Hip
- 20 Belly
- 21 Ribs
- 22 Shoulder
- 23 Shoulder joint
- 24 Elbow joint
- 25 Arm
- 26 Knee joint
- 27 Shank
- 28 Pastern
- 29 Crown of hoof
- 30 Hoof
- 31 Hip joint
- 32 Ham
- 33 Knee joint
- 34 Lower leg
- 35 Hook
- 36 Hock joint
- 37 Shank
- 38 Hoof
- 39 Hoofs

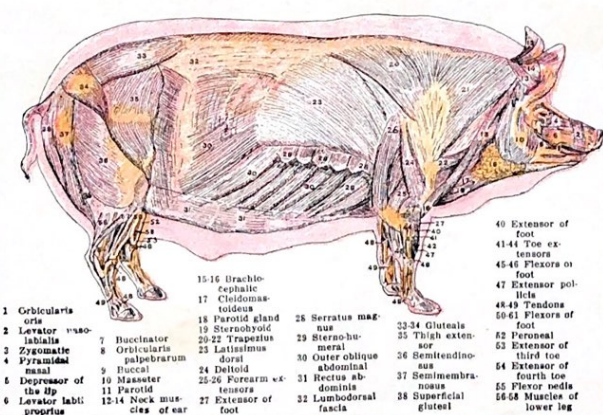
tenderloin is) tells of strength and added weight. If the rump is level, without much slant, the thighs fleshy full and firm, well-spread toward the hocks, a large ham is indicated; an important matter to both grower and butcher. Sides long and deep and an even underline signify good weight, a high-quality of bacon, if not too fat, or ample "sidemeat" if fat.

Short, stocky legs belong to the pig with deep sides and indicate general character and constitution. Weakness in them, with

its blood and half the normal strength of the bones, and produces other violent changes is a most unnatural one and must, if persisted in, end in giving us a race of animals unsatisfactory to all concerned. From parents thus weakened must come descendants that will fall easy victims to disease. Nor is this all; the meat can hardly be of satisfactory composition and flavor.

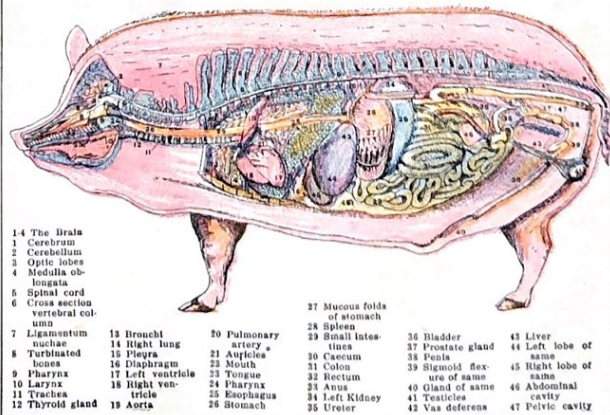
CARE AND FEEDING are of just as much importance to the Hog as to any farm

MUSCLES OF THE HOG

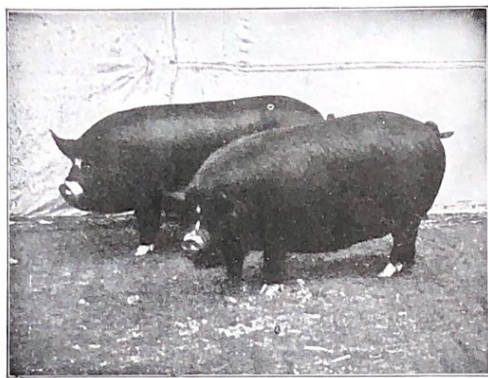


- 1 Orbicularis oris
- 2 Levator nasolabialis
- 3 Zygomatic
- 4 Pyramidal nasal
- 5 Depressor of the lip
- 6 Levator labii propus
- 7 Buccinator
- 8 Orbicularis palpebrarum
- 9 Buccal
- 10 Masseter
- 11 Parotid
- 12-14 Neck muscles of ear
- 15-16 Brachiocephalic
- 17 Cleidomastoides
- 18 Parotid gland
- 19 Sternohyoid
- 20-22 Trapezius
- 23 Latissimus dorsi
- 24 Deltoid
- 25-26 Pectoral muscles
- 27 Extensor of foot
- 28 Serratus m. n.
- 29 Sternohumeral
- 30 Outer oblique abdominal
- 31 Rectus abdominis
- 32 Lumbo-dorsal fascia
- 33-34 Gluteals
- 35 Thigh extensor
- 36 Semitendinosus
- 37 Semimembranosus
- 38 Flexor medialis
- 39-40 Muscles of lower leg
- 41 Extensor of foot
- 42-44 Flexors of foot
- 45-46 Extensor pollicis
- 47-48 Tendons
- 49-51 Flexors of foot
- 52 Peroneal
- 53 Extensor of third toe
- 54 Extensor of fourth toe
- 55 Flexor medialis
- 56-58 Muscles of lower leg

INTERNAL ORGANS OF THE HOG



- 1 The Brain
- 2 Cerebrum
- 3 Cerebellum
- 4 Optic lobes
- 5 Medulla oblongata
- 6 Spinal cord
- 7 Cross section vertebral column
- 8 Ligamentum nuchae
- 9 Turbated bones
- 10 Pharynx
- 11 Trachea
- 12 Thyroid gland
- 13 Bronchi
- 14 Right lung
- 15 Pleura
- 16 Diaphragm
- 17 Left ventricle
- 18 Right ventricle
- 19 Aorta
- 20 Pulmonary artery
- 21 Azygos
- 22 Mouth
- 23 Tongue
- 24 Pharynx
- 25 Esophagus
- 26 Stomach
- 27 Mucous folds of stomach
- 28 Spleen
- 29 Small intestine
- 30 Cecum
- 31 Colon
- 32 Rectum
- 33 Anus
- 34 Left Kidney
- 35 Ureter
- 36 Bladder
- 37 Prostate gland
- 38 Penis
- 39 Sigmoid flexure of same
- 40 Gland of same
- 41 Testicles
- 42 Vas deferens
- 43 Liver
- 44 Left lobe of same
- 45 Right lobe of same
- 46 Abdominal cavity
- 47 Pelvic cavity



BERKSHIRE PIGS, winners at the Smithfield Show, England

SYMPTOMS OF DISEASES OF THE HOG, or of such diseases as may safely be left to home treatment, or may be temporarily relieved while the veterinarian is on his way, may be briefly outlined as follows:

INTESTINAL DISEASES are such as Scours, or Diarrhoea, Constipation, Hog Cholera, Swine Plague, and the various worms. The symptoms of Constipation, whether in domestic animals or in man, are too well known to call for enumeration here. Suffice it to say that tight bowels are more apt to afflict the Hog during the winter and that they should be promptly relieved, as they prevent proper feeding, the assimilation of food and, as a consequence, the normal rate of putting on flesh, for which the hog is being raised.

SCOURS, or Diarrhoea, caused most frequently by stale milk or spoiled buttermilk, a damp pen or bed, by changing the pen in such a way that a chill resulted, or from the filth of a wallow, should be promptly stopped. It is very weakening and reduces the Hog to a condition where it is ripe for other diseases. The symptoms, those of loose bowels and thin watery discharges, are too well known to call for enumeration here.

THE WORMS common to the Hog are the Pin Worm, Round Worm, and Thorn-Headed Worm. The first of these is a minute creature, barely $\frac{1}{2}$ inch in length, white in color, the almost microscopic eggs of which are deposited on the grass, and thence, or from running streams into which they are washed, are taken into the Hog's stomach. Itching at the root of the tail is the usual symptom, as they are closely related to the "seat worm" of humans. While not usually serious enough to cause ill health, they cause great annoyance and nervousness and in that way may interfere with nutrition and fattening. The Round Worm, also, is not usually productive of serious consequences, although at times, when present in considerable numbers, it may cause distressing nervous symptoms and even result in fits. Colicky pains, loss of flesh, great restlessness, dry skin with marked loss of hair are prominent symptoms. Morbid appetite is also often to be observed. The Thorn-Headed Worm, on the contrary, because of its size (sometimes reaching 2 feet in length) and great voracity—is the equal of our tape worm, causing its victim to have a voracious appetite, although the addition of flesh seems impossible, great weakness follows, especially in the joints, the eyes become inflamed and are much swollen in the corners. In this state the Hog soon becomes irritable and even, at times, dangerous, because of the nervous strain.

DRENCHING THE HOG is at times necessary and permanent arrangements should be provided so that it can be done promptly whenever called for. Provide a small pen into which the drove, or a part of them, can be driven so that they will be crowded closely together without room for much moving about. Have ready a noose of stout $\frac{1}{2}$ -inch rope (nash cord is good) and engage it around the animal's upper jaw, well back toward the juncture of the lips; then draw it taut, throw back the hog's head and quickly administer the medicine with a syringe. Do not use a glass syringe; use one of metal. In its frantic struggles the animal is apt to break a glass syringe and, swallowing bits of the glass, die from the effects. Where a hog is heavy, strong and unruly, it is well to be provided with a pulley and stretcher, hung conveniently over the pen. With this, by the same noose method, the hog can be elevated almost off its front feet and in that position the most bulky or obnoxious medicine may be administered. Wait until the hog's most frantic efforts have ceased.

UDDER INFLAMMATION, often called Garret, sometimes follows a difficult birth of a large litter; or it may be caused by milk accumulation due to some of the young litter having died. It is also attributed to germ infections, by some. Such inflammation, frequently very observable, should be watched for very carefully and be taken in hand at once.

QUINSY, a form of sore throat, at times a sort of ton-

sillitis, is usually characterized by difficult breathing, disinclination to feed, a swollen, hot throat, etc. It is not to be trifled with, as it is often a stepping stone to more serious consequences.

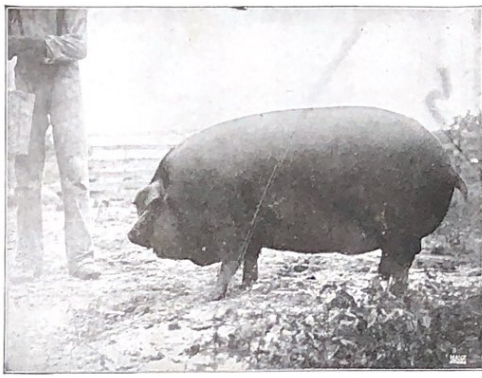
THUMPS is the very characteristic name for palpitation of the heart in the Hog. Said to be due to insufficiency of nitrogen in the food, it is often attributable to too great a ration of corn. The name sufficiently describes the symptoms, the heart's throbbing being very easily perceptible. It should be relieved promptly.

MANGE, another of the diseases of parasitic origin, is too well known in most of the domestic animals to call for description here. Attacking the integrity of the skin, burrowing under it, causing scabs, intense itching and violent scratching, these minute parasites soon produce raw, running sores that almost set the victim frantic. Appetite falls, nervous energy is exhausted, and the victim falls away rapidly. With a magnifying lens of very moderate power the tiny parasites are easily seen; they may be separated from eczema, or any like disease.

HOG CHOLERA, or Swine Plague, are sometimes only indicated in the first stages by fever, and are accompanied by swelling of the tongue and throat. In the postmortem examination button shaped ulcers may be found in the large intestine. Cheese-like collections in the inflamed lungs indicate the probability of Swine Plague being the disease. These are most seriously threatening diseases to be checked and stamped out at once and with the most heroic measures. The veterinarian should be had on the scene at the earliest possible moment.

TUBERCULOSIS in the Hog is closely related in its manifestations to the disease in mankind. Usually it is only detected in the carcass, although at times swellings, notably in the glands of the neck and in the joints, accompanied by a decided diarrhoea, with occasional loss of weight, are to be observed.

SIMPLE HOME REMEDIES for the treatment of the Hog, or for his relief until skilled aid has arrived, here follow another word of warning being first uttered regarding the very great importance of correct diagnosis, before the powerful medicines are administered. **CONTRADICTIONS** may in relief of the Hog, innumerable remedies; there are many excellent proprietary articles on the market for the purpose. Bran mashes con-



POLAND-CHINA SOW, winner of many State Fair Prizes

an empty stomach. Perhaps santonine, of all the above, is most to be recommended.

HOG CHOLERA, while calling for the veterinarian, may be treated temporarily thus: thoroughly pulverize and mix one ounce each of wood charcoal, sulphur, sodium sulphate and antimony sulphide, with two ounces each of the chloride, bicarbonate, and hyposulphite of sodium. Of this a large tablespoonful should be given for every 200 pounds of the hog's weight, once daily. Once a day give bran and middlings, cornmeal, ground oats, crushed wheat, or other soft feed mixed with hot water, into which the above medicine should be stirred; do not feed corn alone.

TUBERCULOSIS is not curable in swine. Animals should be killed as soon as the diagnosis is made and the carcasses should be destroyed effectually.

MANGE can usually be cured by steeping one part of tobacco in twenty parts of boiling water for several hours; clean the affected parts well and then apply this wash with a sponge. Perhaps better is two ounces of arsenic acid in three pints of water, boil one hour and let steep (nearly boiling) for an hour longer. Rubbed into the sore areas this kills both the parasite and its eggs.

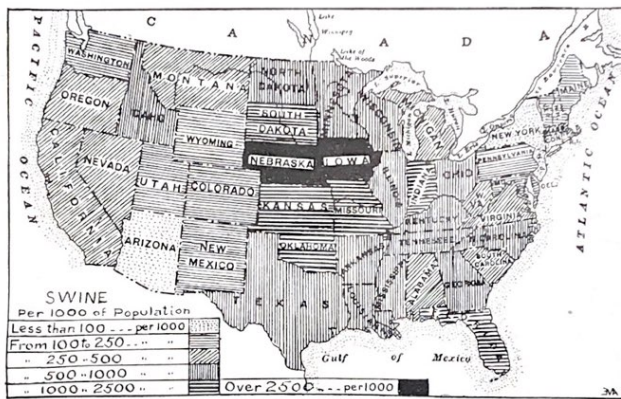
THUMPS, palpitation, is best met by plenty of fresh air and sunshine and a sufficiency of exercise. In the young pigs, the mother's milk-producing ration should be temporarily decreased. Keep the quarters clean.

QUINSY. A $\frac{1}{2}$ drachm of chloride of ammonia in a half pint of water, given twice daily, is an excellent remedy. Give in the drinking water, if the pig will take it; let it have ample cold clean water to drink at all times. Camphorated liniment rubbed into the neck is helpful. Three drops of extract of belladonna with ten grains of chloride of potassium, three daily, will relieve difficult breathing.

SORE MOUTH. A form of mouth inflammation, not of any infectious nature, is sometimes observed in pigs, which have been allowed to wallow in very filthy places, and this is especially so if they have been allowed sour and decomposing food. Saliva dripping from the corners of the mouth and the hog champing its teeth are unmistakable symptoms. There seems to be call for no other treatment than consists in reforming the food supply, which should be of the most cleanly nature, together with an abundance of pure water.

LOSS OF APPETITE. Hogs are usually known to be very ravenous feeders; but they sometimes lose appetite because of the long-continued use of the same ration without sufficient variety. Thus, corn without other grain occasionally becomes very distasteful to them, and they refuse to eat it. This can almost invariably be remedied by a change of diet and the feeding of a ration of very considerable variety and frequent changes. Sometimes a tonic (milk and egg with a little whiskey) is desirable.

POISONING. A common form of poisoning in hogs that are raised near a town, is due to feeding swill from hotels or large boarding houses, where the dishes are washed with washing powder, or some highly alkaline, irritating soap. The leading symptoms are fever, diarrhoea, occasional vomiting and even partial paralysis. In this the rate of mortality is high, and not infrequently the trouble is mistaken for hog cholera. Investigation should be had at once. There are also several plants poisonous to hogs; however, illness from this source is comparatively rare, although hogs are commonly thought to be omnivorous feeders, exercising little care in the selection of their food. Cottonseed meal, if fed in large quantities and for long periods has also resulted in serious poisoning. The young cocklebur is known at times to have a poisonous effect. It is doubtful whether there is any actual poisonous principle in the plant; the irritation is thought to be from eating the young burrs. In all such cases of poisoning, the hog should be drenched, a clean pen and fed most carefully on the best of food and be amply supplied with the purest of water.



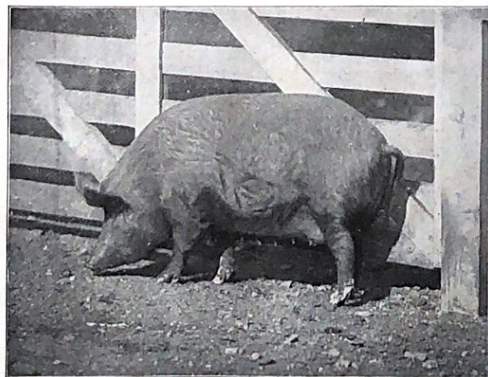
taining sulphur, or some one of the laxative salts, are favored by many. An injection of warm soapsuds is excellent in stubborn cases; hot soap may be given with the feed, though some hogs will refuse food so treated. It is, however, far better to study the diet and alter the food accordingly, thus aiming at the cause and not at the symptom. Apples, most of the root crops, and pumpkins are as a rule sufficiently corrective and will bring the creature back to its normal condition of easy and frequent passages.

DIARRHOEA, or Scours, calls for immediate attention, especially where it appears among the young pigs. Dry quarters are a first essential; at any rate the litter should at once be moved from the present pen. Sulphur, in daily doses of a tablespoonful to each sow, kept up for three to five days is favored by many. White oak bark tea, very strong and given in pint doses twice daily in the slop is also excellent; so is, also, several slabs of black walnut bark soaked in the swill barrel for ten to twelve hours. If necessary, repeat these treatments in three or four days; diarrhoea should be promptly stamped out.

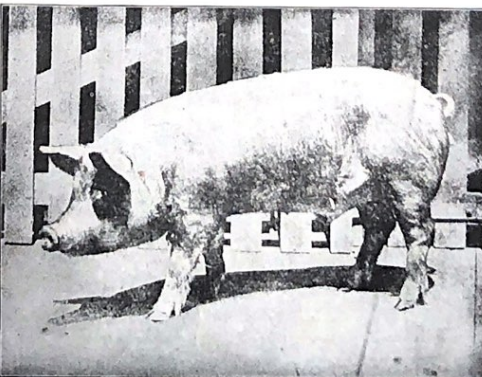
WORMS. Although usually eating in the most ravenous

fashion the hog attacked by worms remains thin and scrawny, and is usually weak and feverish. In case of the latter, quinine in two to four grain doses, should be given three times daily. Weakness may be overcome by a stimulant of whiskey and eggs, or cod liver oil in place of the eggs. As a rule, however, removal of the worms will have a sufficiently stimulating effect. For the Pin Worm, or seat worm, injections of quite warm water, followed by an infusion of quassa in excellent. The latter is made by infusing two ounces of quassa chips in a pint of boiling water, using it as an injection when cool. A good strong purge, such as below described will often aid in ejecting some of these worms.

For both the Round Worm and the Thorn-Headed Worm a powerful purge is needed. An excellent one consists of a half ounce of fluid extract of senna and senna at a dose, continued every four hours until purging results. Santonine is an excellent and powerful vermifuge; administer it in pills of four grains each. Wormed oil (chenopodium) is very highly esteemed by some, in from twenty to thirty drops in syrup; each of these remedies should be followed in two hours by a strong purge, as above, and all should be administered on



TAMWORTH SOW, KATY BELL, Iowa State College

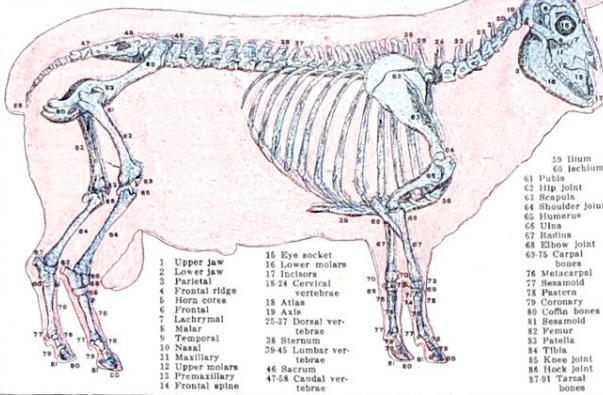


Packer Ideal Model of a Bacon Hog

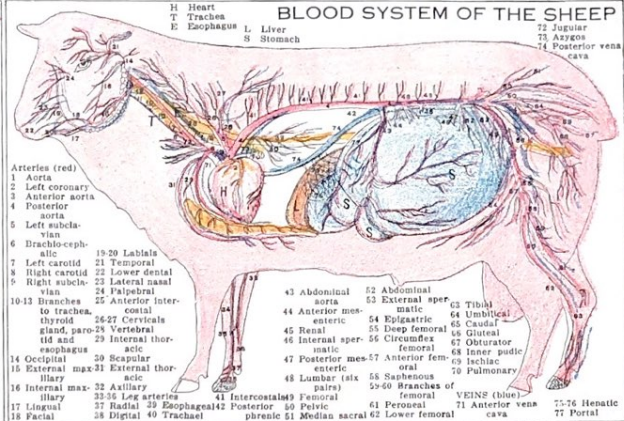
THE SHEEP IN HEALTH AND DISEASE

Physiology and Hygiene of the Sheep

SKELETON OF THE SHEEP



BLOOD SYSTEM OF THE SHEEP



The shepherd and his sheep have been familiar figures from before the dawn of history, and the horse alone excepted, care has been given to improving the breeds of sheep, longer than to any other domestic animal.

In our country the best-known and most-valued breeds are the Merinos, of the fine-wooled class, the Southdowns, Hampshires, Shropshires, Dorsets, Oxford and Cheviots, of the medium-wooled breeds, and Cotswolds, Lincolns, and Leicesters, of the long or coarse-wooled sheep. There are more Merinos raised in the United States than of all other breeds combined; they numbered about 75 per cent. at the last census.

CARE AND FEEDING call for less attention and worry in the sheep than in the case with any other of our domestic animals. None of them can weather the repeated storms and exposure that is possible to most breeds of sheep, the hardiest of which, while on range, partake of the nature and resisting powers of the wild mountain varieties, from which they were originally derived. The sheep does not well stand tendering or any form of life that makes for too great ease of living. Only at the time of the birth of the lamb do they seem to require any special attention in this direction. Uncleanliness in yards or sheds, however, is to be guarded against at all times. Unventilated basement barns or stables warm enough for dairy cows will result in serious losses in the lamb crop.

In food, access to pure water for the sheep and a certain degree of moisture for their pasture, when living out, seems to be all that is required. The sheep is better able to choose his food wisely, when on range, than most of his domestic relatives.

Hoof diseases, lice, scab, wool balls, constipation, caked udder, and garget are diseases that may be classified as those of neglect or carelessness; while stretches, colic, quidders, bloat, and diarrhoea are mainly to be attributed to mistakes or inattention as to their feeding.

Sheep are only excelled by hogs in their ability to produce meat from a given quantity of food, and are superior to them in the utilization of coarse fodders and bulky food, even excelling cattle in this respect. The usual estimate of averages is that it calls for 9 to 11 pounds of dry matter to add a pound of weight with steers, while the same will be produced in sheep by 7 to 9 pounds of the same food. And—most important—while the sheep is excelling in this way he will grow a fleece worth from \$1.00 to \$2.00 per head.

GENERAL USEFULNESS. A medium-sized flock of sheep will yield more profits to the farmer, under mixed farming, than any other animal. They are almost omnivorous eaters of weeds, wonderful in their ability to keep a farm clean of them, thriving better on poor pasture than any other animal; and almost equal to goats for destroying underbrush.

GROWING FOR WOOL ALONE cannot be profitably conducted on high-priced agricultural lands, if wool is selling at 25 cents a pound, or less. Under western range condition and in large flocks, where one man can handle from 2,000 to 4,000 sheep, there is a possibility of considerable profit for wool alone; but even there

many growers believe in the greater profits of a general-purpose sheep, which will yield a good fleece and also a good mutton carcass. It seems that the kind of ration, so long as it is sufficiently nutritious, has very little influence on the quality of wool produced. Grain-fed lambs produce a greater gross weight of wool, as a rule; but, after scouring, the amount of washed wool is not greater. Apparently only the "yolk" (the natural grease or oil) in the wool is increased by a grain diet, to no particular profit.

MUTTON SHEEP are raised on an enormous scale on some western ranches, where close herding and feeding is so arranged and systematized that four men can take care of fully 10,000 sheep. In favorable years enormous profits are made on such ranches.

HOTHOUSE LAMBS, probably the most profitable class in the sheep industry, are fat lambs weighing from 40 to 60 pounds, marketed between Christmas and the following April, January and February lambs finding the best markets in our large cities. The chief difficulty is in getting the ewes to breed so that their lambs will be dropped in October to December. For this purpose the Dorset sheep are the most popular. Experiments show them to yield lambs averaging 53.5 pounds when nine weeks old, each having made an average gain of nearly 5 pounds per week.

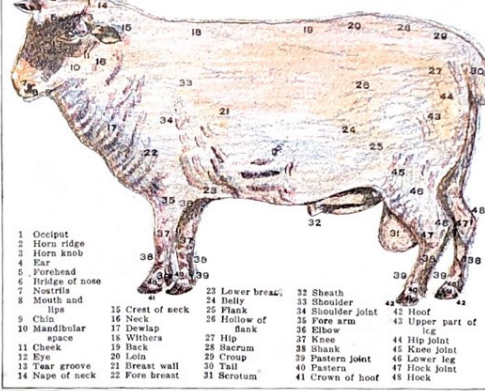
COMMON DISEASES of sheep have among them a number of ailments that respond favorably to home treatment, provided diagnosis is accurately made. Among these the grub worms (gid or sturdy), tapeworms, and the stomach worm, are internal parasites; while scab, ticks (causing wool balls), lice, and anthrax, are external parasites. Scab, a most troublesome visitation, is universal, being found wherever sheep are. It is, in the common acceptance of the term, a contagious disease to be rigorously combated and stamped out at its very first manifestation. For anthrax there is nothing to be urged but to kill and burn the carcass; it is transmissible to humans.

Colic, diarrhoea, bloat, thrush in the lamb's mouth, and black muzzle, are digestive ailments, due mainly to faulty feeding and are amenable to the ounce of prevention, much more readily than to the pound of cure.

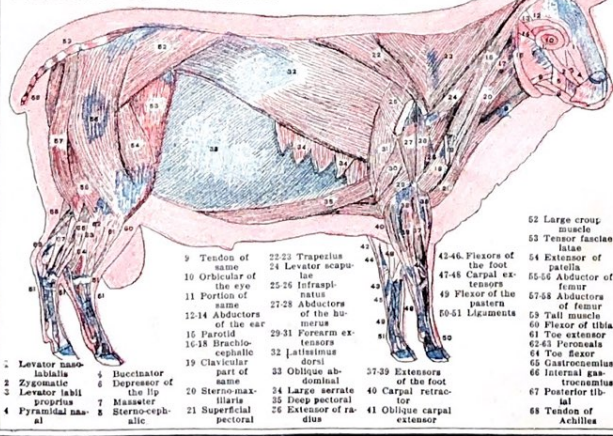
As with all other farm animals, over-dosing and experimentation with "cure-alls" are quite as dangerous as are these diseases in their early stages, and rest and quiet, until a veterinarian arrives, is often the safest plan, unless the grower or some assistant has unusual skill in such matters.

SCAB, technically *Scabies*, in Sheep is not only the commonest disease among them, but probably is the most universal of any of the diseases of our domestic animals. It is due to an external parasite, which uncleanly quarters aid in spreading, and is contagious. The suffering animal scratches, rubs and bites itself unceasingly, until its body soon becomes a mass of sores and their scabby coverings, from which comes the name. It is the product of an itch-insect, *sarcoptes ovis*, relatives of which cause itch in the human and mange in dogs, cats, horses, cattle, etc. The Sheep's side is usually first attacked; thence it spreads rapidly over the entire body. Frequent dipping alone will eradicate it.

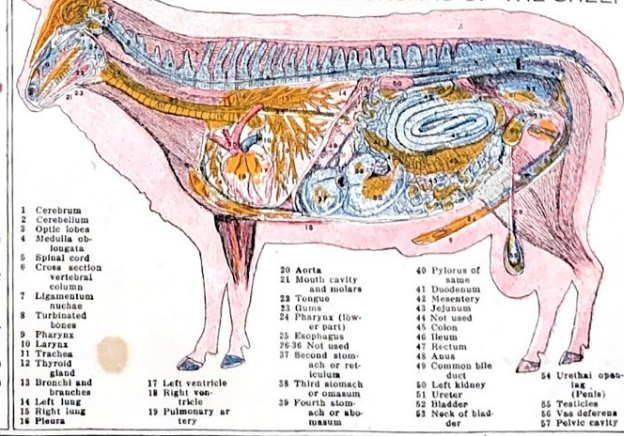
EXTERIOR OF THE SHEEP



MUSCLES OF THE SHEEP



INTERNAL ORGANS OF THE SHEEP





A Famous Prize Winning LINCOLN RAM

DISEASE SYMPTOMS of the Sheep are not as common as in the other domestic animals; while, perhaps, the sheep is subject to as many different diseases as the other animals, these occur less frequently and it appears to be a sturdier creature than the other farm denizens. In the frequency of their appearance the leading symptoms seem to be those of the

PARASITIC DISEASES. Principal among these are the various Worms, Lice, Scab, Wool Balls, and Anthrax. With the exception of the last named these diseases are more or less amenable to home remedies.

WORMS are of three principal sorts: (1) The Stomach Worm, a thread-like worm, about an inch long, found in the sheep's fourth stomach, most frequently in young lambs. Colicky pains are a chief symptom; (2) the Tapeworm, causing an abnormally great appetite while the flesh continues to waste away; and (3) the Grub Worm, the larva of the gadfly, causing extreme giddiness, from which Gid, the secondary name is derived.

SCAB AND LICE cause much the same symptoms, inordinate scratching and even biting of the infected areas. Scab usually appears first on one side or the other, but quickly spreads over the entire body, if not immediately conquered. It is a contagious disease and is universal. These skin irritations cause the sheep to bite at the infected areas and in that way wool is carried to the stomach—hence **WOOL BALLS.**

ANTHRAX, the immediate and very dangerous nature of which has been thoroughly discussed elsewhere, calls for the early arrival of the veterinarian. It is perhaps as well to anticipate his almost invariable verdict and kill the sheep and thoroughly destroy its carcass. Remember that Anthrax is communicable to man and greatly to be dreaded. Stamp it out!

DIGESTIVE TROUBLES in the sheep are mainly Constipation, Diarrhoea or Scour, Thrush, Bloat, and Colic. The first two of these have been sufficiently discussed elsewhere in these columns. Their symptoms are practically the same as in man.

THRUSH, due to the derangement of the mother's digestive processes, appears in the mouth of the lamb, which refuses to eat and is greatly alleviated.

BLOAT is easily diagnosed by the state made plain by the name, the body appearing to be out of all proportion to the legs.

COLIC AND STRETCHES cause the sufferer to lie down. In Colic it grinds its teeth; this is often mistaken at first for the Stretches, which causes the sheep to extend itself, when down, to the greatest possible length. Both have been mistaken for yearning, the pangs of birth. Colic should be diagnosed early and be quickly relieved.

NEGLECT DISEASES may be enumerated as Foot Rot or Foot Scald, Caked Udder, and Inflammation of Eyes. Limping and soreness in the clefts of the feet are the symptoms of Foot Rot; unclean runs and neglect

in foot-trimming are the prime causes. Neglect of the ewe at weaning time causes Caked Udder, whose name sufficiently describes the symptoms of the disease. Related to it is Garget, a knotty congested condition of the udder, usually due to a cold or chilling. Faulty diet, sometimes resulting in total blindness is caused often by exposure to severe weather, but more frequently is due to a faulty construction or location of the barn.

MINOR DISEASES, so far as frequency is concerned, are Tumors, a manifestation of tuberculosis; Goutre, a swelling of the neck glands, usually deadly; and Urinary derangements, usually in the ram, whose water is stopped, and generally due to an over supply of nitrogenous food. These all should call for the prompt intervention of veterinary skill.

USEFUL HOME TREATMENTS of the foregoing diseases are here described, it being premised that correct diagnosis is of the utmost importance. The wrong diagnosis may call for a remedy utterly unsuited, perhaps radically hurtful, to the true disease. This is always the main danger in home remedies and methods, as should constantly be remembered.

PARASITIC DISEASES, already described, are of two classes, internal parasites, Worms, and external, the ticks, lice, etc. For the first class, the Worms, santonine is especially to be recommended. In doses of from two to four grains administered on an empty stomach and followed by an active purge, it is usually entirely effective. For the Stomach Worm, the vetches are recommended as a preventative. Flour, honey, and powdered tin in equal quantities, made into a three or four drachm pellet, given on an empty stomach and followed by an active purge, is generally effective with these worms. For the Grub Worm a sovereign remedy is to bore some augur

holes in a log, fill them with salt and cover over with tar; in their eager attempts to obtain the salt, the sheep get the tar on their noses, from whence it is soon transferred to the stomach; tar is a most effective remedy for the grubworm. For Tapeworm, use santonine, as above described, or, also highly praised, let the animal fast for at least 15 hours, a whole day is better; then administer an injection of warm water and quickly follow up with a drachm of oil of male fern in two ounces of castor oil.

SCAB AND LICE. Both of these call urgently for dipping; no other course holds out any real promise of cure. There are a number of excellent proprietary dips on the market. "Krosol" is a highly recommended dip for Lice. For Scab at least three dippings will be necessary and all feed racks, troughs, mangers, stalls, fences, etc., should be most thoroughly disinfected. Intervals of from ten days to two weeks should be between the dippings.

WOOL BALLS, rarely cured, is related in cause to the above, as elsewhere described. Raw linseed oil is sometimes found to be palliative in this trouble.

ANTHRAX or Malignant Pustule, is incurable and is exceedingly communicable, even man being in danger. Kill the animal promptly and burn or destroy with quicklime, burying deeply.

DIGESTIVE TROUBLES nearly all call for the study of dietaries and a change in most instances. In Constipation the root crops and oil cake will prove to be corrective. Soapy injections, or of raw linseed oil, followed by a good dose of castor oil will usually not need to be repeated, if the feed is looked after. In Diarrhoea, on the other hand, the castor oil should precede a dose consisting of one drachm each of powdered ginger and laudanum, mixed thoroughly



MERINO RAM, DON ALFONSO, Champion at N. Y. State Fair

ly with twelve drachms of prepared chalk. One dose is usually sufficient; keep sheep for awhile on dry rations of a poor nature.

COLIC AND STRETCHES. The similarity of symptoms in these diseases has already been alluded to. If not very soon relieved colic is apt to lead to severe inflammation and to death. A drop of laudanum with one drachm of powdered ginger, taken in a little flaxseed tea usually produces prompt relief. In the case of Stretches the prevention is the true line of treatment. This can usually be procured by the abundant feeding of roots, which are always to be recommended under all circumstances. For the throes of the attack, however, melted lard, in one-fourth-pound doses, will be found to be a reliable remedy.

TUMORS. The sheep with a decided tumor, tuberculosis, had better be killed and burned.

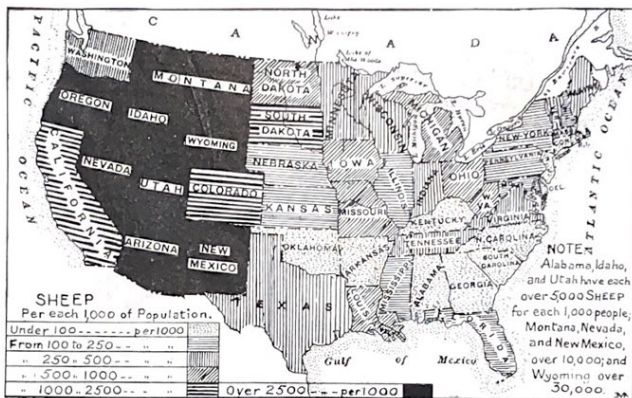
GOITRE. In adults, cut into the growth heroically and when bleeding stops, inject a small syringe full of tincture of iodine, two-thirds strength. Where Goitre appears in the young lamb it is usually quite incurable and it is best to kill the little sufferer.

CAKED UDDER, Sore Teats and Garget. In Caked Udder the ewe should be sheltered during treatment. Mix turpentine into lard to the consistency of cream and, after bathing the udder in hot water, rub the mixture gently but thoroughly into the inflamed parts. Sore Teats, usually due to the lambs eagerly biting them, can best be relieved by applications, three or four times daily, of equal parts of olive oil and glycerine. Garget should be very promptly relieved. Bathe the udder with hot water in which is dissolved an ounce of baking soda. Then dry the udder with a soft cloth and rub in thoroughly either camphorated oil, or lard and turpentine, as above described.

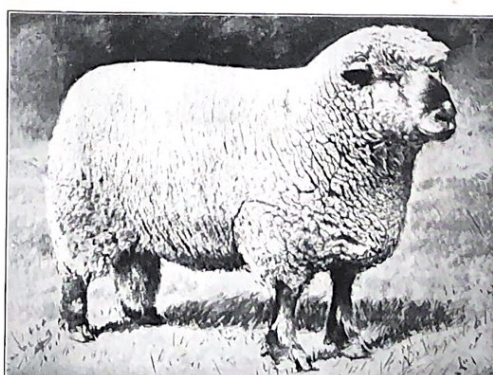
EYE INFLAMMATION calls for immediate and thorough washing of the eye with some good eye lotion, of which your druggist can recommend several. Then, the veterinarian should be sent for, or blindness is quite likely to ensue.

BLOAT should be tapped as early in the trouble as possible. A common knife may be used, but a trocar is better and one should be kept on hand. Whatever the instrument, it should be scrupulously clean and be sterilized by passing several times through a candle's flame. Take care not to strike a kidney; study our plates. After tapping, sterilize the wound with peroxide of hydrogen and cover with adhesive plaster. Then give a heavy dose of raw linseed oil, followed in one hour by a dose consisting of three drachms of hyposulphite of soda and one drachm of powdered ginger, mixed in water.

FOOT ROT, or Scald, should be first treated with the knife; cut away all dead or proud parts; then drive the sufferer slowly through a trough in which is a dilute of carbolic acid, or blue vitriol. Ask an expert as to solution and remember that it is a dangerous compound.



SHROPSHIRE RAM, RINGLEADER, a frequent Prizewinner



OXFORD RAM, undefeated at many shows